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Earl of Cauford

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E S S A Y S
ON THE
TRADE, COMMERCE,
MANUFACTURES, AND FISHERIES
OF SCOTLAND;

CONTAINING,
REMARKS on the Situation of most of the **SEA-PORTS**;
the Number of **SHIPPING** employed; their **TON-**
NAGE;

STRICTURES on the Principal **INLAND TOWNS**; the
different Branches of **TRADE** and **COMMERCE** carried
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By **DAVID LOCH** MERCHANT,
And **GENERAL INSPECTOR** of the **FISHERIES** in
SCOTLAND.

IN THREE VOLUMES.

VOLUME I.

EDINBURGH:

Printed by **WALTER** and **THOMAS RUDDIMAN**,
For the **AUTHOR**; and Sold by all the **Booksellers**
in **Great Britain** and **Ireland.**

M,DCC,LXXVIII.



T O

The Earl of Abercorn.

MY LORD,

AFTER weighing in my mind the excellency of those Noblemen and Gentlemen, who have shewn themselves friends to their Country, by encouraging Industry, promoting Trade and Commerce, and establishing Manufactures, (characteristics of the real Patriot, and the only true sources of a Nation's wealth and prosperity)--your Lordship stands eminently distinguished among the rest, by the many noble, useful, and extensive undertakings, planned, perfected, and pursued under your Lordship's fostering care.

iv DEDICATION.

These are circumstances, my Lord, not to mention the many noble acts of benevolence, humanity and liberality, exercised towards those who are more immediately under your Lordship's influence,—that, while they add lustre to your dignity, will redound to your immortal honour, and made me doubly anxious to commit the present Work to your Lordship's patronage,—intended to excite, cherish and increase that love for Trade and Manufactures, which your Lordship has been ever studious to promote; and which, if prosecuted with due vigour, will raise this Country, languishing in poverty and obscurity, to the highest pitch of opulence and glory.

That your Lordship may live long in health, to enjoy the sweets of happiness that are the issues of such exalted

DEDICATION. v

alted virtues, is the most ardent wish
of him who has the honour to sub-
scribe himself, with the most pro-
found veneration,

MY LORD,

Your Lordship's

most obedient,

and very humble Servant,

DAVID LOCH.

EDINBURGH, }
28th Oct. 1778. }

DEEDS

that the same is the only one of
its kind in the world, and the
only one of its kind in the world.

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P R E F A C E.

THE Author of the following sheets has frequently communicated his sentiments to the Public, in various periodical papers, on the Trade, Manufactures, and Fisheries of Scotland, with a view to excite a spirit of industry, emulation, and public spirit among the inhabitants of this country; and he is happy to find they have been, in some measure, successful, in having roused them from that lethargic indolence, and dispelled that infatuated prejudice, which have long kept this part of the united kingdom in poverty and thralldom.

Many gentlemen, who are true friends to their country, have often expressed their desire to see the Author's sentiments, on the above particulars, properly collected together, and arranged under their different heads, with a view of rendering them more generally serviceable. As his ruling passion is his country's weal, and as he is happy to be a mean of furthering its prosperity, he has cheerfully undertaken the task, hoping, that the end aimed at in the publication will sufficiently atone for his inability, as a
writer,

writer, to do common justice to such important subjects.

Since his last publication, he has made Tours through almost all the great manufacturing towns in Scotland, as well as to the stated rendezvous of Fishing in the Highlands and Western Isles. These have afforded many facts and observations well worthy the attention of the Merchant, the Manufacturer, and the Mechanic. In the present work they are all faithfully recorded; and he hopes they are such as should not appear below the notice of the Nobleman, and the Gentleman of property; nor even be disregarded by any individual who wishes well to his native Isle.

The branch of manufacture chiefly contended for in the following work, is not one, for the prosecution of which we are obliged precariously to depend upon foreign nations for materials, neither is it found too intricate for the genius of our countrymen: but it is one, for which indulgent Heaven has blessed us with every thing necessary for its foundation; and we have only ourselves to blame, should we obstinately refuse to profit by the means put in our power. If we had firmness and resolution to dissolve that charm of fascination, under which this impoverished

rished country has been long fettered, and unanimously to persevere in the establishment of the Woolen Manufacture, already happily begun, we should shortly see Scotland raised from abject poverty and mean obscurity, to the same degree of opulence and dignity as our sister kingdom, acquired only by this invaluable branch.

As the greatest object for increasing our Woolen Manufacture, justly styled the staple of this Island, is a sufficiency of good Wool, the Author has endeavoured first to enforce the propriety of increasing the number of Sheep, and the necessity of procuring the best breed of that useful animal from every quarter of the globe; and in the various branches of this manufacture, he has enlarged upon such as are most beneficial to the labouring poor, as well as to the proprietors themselves; convinced that workmen, who are able to purchase, by their industry, the necessaries, and enjoy the common comforts of life, are induced to marry early,—that matrimony increases population, and that population is the primary source of a nation's wealth and strength, which are to be estimated only by the number, virtue, and industry of its inhabitants.

With regard to the Linen Manufacture, it has long been favoured with the protection and encouragement.

x P R E F A C E.

encouragement of the public, on which account it may be deemed temerity in an individual to combat the opinion of so many respectable characters, who have long considered it the *staple* of this country; but opinions, by whomsoever received, must always give place to facts. On this ground it is, that the Author entertains no doubt of convincing every impartial Reader, that Flax, being an exotic, and the soil and climate unfavourable to its culture, can never be raised here to perfection; and that to attempt to establish the Linen Manufacture as the staple of this country, is unnatural and absurd, and ultimately promises no real advantage to Scotland.

As very large sums have been, and still continue to be remitted to England for London Porter, which we can brew at home as good as, and cheaper than, our neighbours; the Author has endeavoured to rouse the attention of his countrymen to the manufacturing of this article, as an object of no small consequence. He has the happiness to find that his efforts, in this respect, have been crowned with a degree of success almost equal to his wishes; as the inhabitants in general, divested of the prejudice they had entertained against Scots malt liquors, are giving due encouragement to their own, thereby giving employment to an additional number
of

of hands, keeping the little money among us in circulation at home, and greatly increasing the revenue of Scotland.

The manufactures established in and near Paisley and Dundee, comprising the Thread, Lace, and Silk branches, are the next subjects of review, in treating of which, the Author, convinced of their very great importance in giving comfortable subsistence to so many thousands of industrious labourers, has attempted to do justice to their intrinsic value, by placing them in such an impartial and conspicuous point of view, as to afford a pleasing picture to every friend and well-wisher to his country.

After particularizing a Tour through most of the trading towns and villages of Scotland, enriched with notes and observations concerning the nature and extent of their Trade, Manufactures, Improvements, &c.—the Fisheries of Scotland, with a traverse into the Western Isles, occupy the whole of the second Volume. The Author has long considered the Fishing trade as an object of the utmost consequence, well worthy the attention of the Legislature, inasmuch as it is a great nursery for sailors, causes an exchange of their cargoes for raw materials, imported at a low value, extends the consumpt of
our

our own commodities, and is the life of manufactures; proving, on the whole, an inexhaustible source of riches to the whole nation.

The Author has next made some observations on Trade in general,—expatiated on the utility of inland navigation, particularly on the importance of the Great Canal, intended to open a communication between the East and West seas,—and concludes with strictures on the unhappy contest between Great Britain and the Colonies, together with a plan to reduce the Americans to obedience. He has also attempted to demonstrate that the advantages of our trade with the Americans, said to be principally in favour of the mother country, centered intirely among themselves, and that they are indebted to Great Britain for every blessing they enjoyed prior to the commencement of their unnatural rebellion.

Having now given a brief account of the nature and design of the Work, the Author offers it to the public (though the result of thirty years experience in *Trade*), with the greatest diffidence of his abilities as a *Writer*. He was always a volunteer when giving his desultory thoughts in periodical papers and in detached pieces; but he has now been impressed into the service by several of his *Friends*, who wish well to the *Trade* and

and *Manufactures* of Scotland. If the public in general, and *those* in particular, receive the disinterested efforts of an individual, to further and secure *their prosperity*, with satisfaction and complacency,—and if they prove in the smallest degree useful to his countrymen, he shall meet the sneers of the supercilious, and the acumen of snarling critics, with the calmness and fortitude of a philosopher, and, arrogating to himself the merit of a good intention, seek shelter in this pleasing reflection, *That his sole aim was his country's good.*

*St Ann's Yards,
Edinburgh, 28th Oct.
1778.*

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T H E
C O N T E N T S.

C H A P. I.

S E C T. I.

GENERAL CONTENTS.

*OF the Propriety of increasing the
Number of Sheep, and the Necessity
of getting a proper Breed of that
useful Animal introduced into this
Country.*

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a proper quality, for prosecuting the woollen
manufacture vigorously. Conjectures on the
cause of the amazing decrease of sheep in
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ESSAYS

E S S A Y S
ON THE
TRADE, MANUFACTURES,
AND
FISHERIES OF SCOTLAND.

CHAP. I.

SECT. I.

*Of the Propriety of increasing the Number of
Sheep, and the Necessity of getting a proper
Breed of that useful Animal introduced into
this Country.*

I HAVE chosen to make the breeding of
Sheep the first chapter of the present work,
because, without a due degree of attention
to this important article (however anxious the
country may be to encourage their own woollen
manufacture, in preference to every other), the
manufacturer cannot be supplied with a suffi-
ciency of good wool, which must impede its pro-

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gress,

2 ESSAYS ON THE TRADE

gress, and prevent its ever arriving to that height of perfection which we might insure to ourselves, if we were to increase the *quantity* and *quality* of *wool*, the natural produce of our own country.

To accomplish this is by no means a difficult, and far less a hazardous task.—I have been told there may be at present three millions of Sheep in Scotland, and that their number might be at least increased to ten millions, without encroaching upon a single acre of corn-land.

Before the union, we not only clothed ourselves, but sent cloth and woolen goods abroad, to a considerable amount: Nay I find, besides, that large sums came annually into the country for unmanufactured wool; from which it is evident, that the number of Sheep in Scotland before that period must have been greatly superior to what we have at present. As a corroboration of the fact, I must beg leave to mention one instance, which I have from undoubted authority; and that is, that forty years ago there were in East and Mid-Lothians, twenty Sheep for one that are in these counties at present.

That these are facts, no one, I presume, who is acquainted with the history of Scotland, will attempt

attempt to controvert. It may not, therefore, be deemed altogether improper, in the present undertaking, to inquire into, and endeavour to account for, the causes of this amazing decrease of our Sheep, so particularly destructive to the riches and prosperity of this part of the united kingdom.

It is well known, that, however the English may now affect to despise the Scots, they courted an union with unremitting ardour, for a series of years; and that this union, effected by underhand dealing, was made rather to answer sinister views than to be productive of any advantage to Scotland, is the opinion of the bulk of the nation; as well as that they thought themselves sold by a few of their leading men. Whether, notwithstanding, this union has been advantageous to both countries, is a question that has often been agitated, but which does not, from the nature of my design, seem necessary for me to inquire into: perhaps, if my opinion were asked, I should answer in the affirmative. Certain it is, that the noblemen who managed this momentous affair on the part of Scotland, possessed great landed property; and that they received very large sums of money in order to accomplish this most desirable event. The Woolen Manufacture had long been considered as the

staple of England,—as an inexhaustible fund of riches. It may therefore be at least presumed, that these noblemen, who had experienced the irresistible power of English gold, might, in an ignominious manner, be applied to for preventing Scotland from interfering with England in its favourite manufacture. Many other branches of trade might, with great appearance of utility, have been pointed out to the inhabitants of this country, and, among the rest, that of the *Linen Manufacture*, in which the English would never attempt to be their rivals. If, therefore, such a thing was agitated, which I offer merely as conjectural, the most effectual way of securing success was, to discourage the breed of Sheep in Scotland; because it is impossible to prosecute any manufacture without the necessary materials. Whether the decrease of Sheep is owing to this cause or not, I will not take upon me absolutely to determine; but this I know, that their number has gradually lessened since that period, to the great prejudice of the internal prosperity of Scotland. This much I thought necessary to offer, in order to pave the way for recommending an increase of the number, and an amendment of the breed of our Sheep, greatly neglected since the union, but which, if properly attended to, will be more advantageous to the industrious people of Scotland than all the

the gold mines of Mexico and Peru are to the lazy inhabitants of haughty Spain.

In the first place, it will be acknowledged, that AGRICULTURE is the source of every nation's strength and wealth, and the mother of all arts and sciences. Many authors who have, within these twenty years, judiciously treated this subject, as well as trade and manufactures, have done infinite service to this part of the united kingdom. They have laid a foundation for many improvements, which do already, and will continue hereafter to redound to the nation's benefit, as much as their writings do *now* to their honour and credit.

The strength and wealth of a nation consists in the number and industry of its inhabitants: And many patriotic noblemen in this country, actuated by the best of principles, have encouraged men to come and settle in places that wanted cultivation, or that seemed adapted by nature for the seat of manufactures. It is a well known truth, that in all countries thinly inhabited the people are indolent and poor: The causes are obvious; for the natural soil, almost without culture, supplies their immediate wants; and were they to labour it, they would not find a market for their produce: whereas,

in all populous countries the inhabitants must work or starve; for every individual must be fed, and the ground is the most natural, and the only magazine that can supply them. Hence people of both sexes and of every age are employed; life and health preserved; riches acquired; each different species of animals and vegetables increased; trade promoted; and government supplied with men and money for the nation's defence. In short, it is under this latter circumstance only that people enjoy life, liberty and property, and that arts and sciences flourish and are brought to perfection.—But to return from this digression——

Scotland, being in many places mountainous, is, perhaps, for that very reason, one of the best countries in the world for raising Sheep. These useful animals like a dry pasture, and will endure much cold, provided they be kept from wet: nay, the colder the climate is in which they are brought up, the finer will their wool be. This may be demonstrated by an experiment attended but with little trouble to the curious farmer, who may be desirous of accounting for the different degrees of fineness of the threads or filaments of a fleece of wool. These threads are constantly varied according to the heat of the season, or the different temperature
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of the air, at the time of its growth. For it is a certain fact, that that part of a fleece which grows in the coldest season, or in winter, is infinitely finer than that which grows in the summer; and that these threads or filaments on any fleece are exactly proportional to the different degrees of the temperature of the air, or the variations of heat and cold in the district in which the Sheep are reared.—Numberless other instances might be given in support of my argument, but I shall only adduce the few following.

That large tract of country called Thibet, situated betwixt India and China, is mostly 8000 feet above the level of the sea, and consequently, notwithstanding its southern climate, must be very cold; yet the Sheep delight to feed there, and produce exceeding fine wool.

The mountains of the Andes and Peru, belonging to Spain, which lie in South America, are still higher, being about 15,000 feet above the surface of the sea. The cold is so exceedingly intense on the *summits* of these mountains, that neither man nor beast can breathe upon them; yet the Sheep, fed on the lower parts of these mountains, produce wool of a finer quality than the former.—Instinct, which prompts them to *ascend* as high as they find food

food and climate fit for them, as naturally induces them to *descend* as winter approaches. In these high mountainous countries, the Sheep may always enjoy the same temperature of air ; for, as the season alters, the place of abode can also be altered. I suppose 8000 feet above the level of the sea is cold enough to live in when the sun is vertical, or right over our heads, without shade ; and that, by descending 4000 feet during the winter months, the same climate, or more properly the same degree of heat and cold, may be always enjoyed. Thus it is, that the Sheep are constantly kept in a cool region all the year round, and at the same time are plentifully supplied with good dry wholesome food.

I needed not to have carried you farther than Spain for examples in support of the truth of my argument, nor should I have omitted in this place to particularize one instance, were it not that I intend to borrow a good deal concerning the method practised in that country of pasturing their Sheep, from authors who have professedly written on the subject : but as this will orderly fall to be taken in when treating of the manner after which Sheep should be managed in general, I shall defer it till it comes in course. Before I quit this subject, however,
I shall

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I shall beg leave to mention, that Zetland, the coldest climate in our country, produces Sheep with the best wool, not inferiour to that of Spain, from which I have often had stockings manufactured much finer than any of the kind I ever saw, which were beautiful beyond description. There is no country I have had occasion to be in, that promises better than our western Highlands for rearing and feeding Sheep, that may produce good wool. These numerous hills afford excellent Sheep-pasture; and, from their vicinity to the great western ocean, the snow does not lie upon them, in the severest winter, for more than two or three days together. These superior advantages, which kind nature has bestowed on this part of the country, have induced many of the judicious inhabitants to improve the breed, and augment the number of their Sheep.

It is with no less satisfaction I am able to declare, that a similar plan was some time ago set on foot, and has been attended with the wished-for success, by several noblemen and gentlemen of this part of the country:—Such laudable examples of real patriotism, begun by so many respectable characters, both for birth and learning, will, I hope, be followed by every gentleman and farmer in the kingdom, who has the prosperity

prosperity of his country at heart. These truly patriotic leaders merit the highest encomiums for the trouble and expence they have incurred in procuring proper rams from England, in order to improve the breed of Sheep, as best suited the nature of the pasture. This was striking at the root of the disease, and laying a lasting foundation for the establishment and improvement of the *Woolen Manufacture*. By stationing these rams in different parts of the country, and allowing every gentleman and farmer to send their ewes to be served by them, they have shewn the world that their principal object is the good of their country; and that they themselves are convinced, that nothing can tend so much to the glory and welfare of Scotland, as a due attention to this important branch of trade, the first inlet to which is a proper breed of Sheep, from which plenty of good wool might be had, and to the accomplishment whereof no other method could be more effectual. It is some time since I proposed, and strongly recommended, such a plan; it may therefore be naturally supposed, that I feel no small degree of happiness, in finding my sentiments coincide with, and supported by noblemen and gentlemen, not less distinguished by a love of their country, and every mental excellency, than by their exalted birth; in which last
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they are inferiour to none in the three kingdoms. When this wise and salutary plan of improving the breed of Sheep shall be adopted through every part of Scotland, as I have reason to hope it soon will be, I am conscious the most salutary effects will result from it, as well to the breeder of Sheep in particular, as to the country in general.

Every body will allow that the Sheep is a most excellent animal, his flesh supplying us with good and wholesome food, and his skin with useful and ornamental cloathing; and, notwithstanding the serviceableness of this animal, he might still be more beneficial to us, were people in general to make choice of a proper breed, and manage their *wool* with more judgment. Some persons falsely imagine, the *coarser* the wool is, the more *hardy* the Sheep; which erroneous notion has induced many to keep tups covered with *hair* instead of *wool*; and some of these neither a good black nor a good white, but a mixture of both. Now altho' the wool in this state is reduced in its value at least one half; yet, not satisfied with this degeneracy, they smear it abundantly with tar, which, besides decreasing its worth to the great detriment of the farmer, renders it almost useless to the manufacturer. It should, however, be observed, that
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the quality of wool which is analogous to the temperature of the air at the time of its growth, but more particularly to the coldness of the climate (being finer as it is more intense), has also some dependence on the quality of the pasture; for hairy Sheep, transported to a rich pasturage, will cause the wool to grow much finer, and *contrariwise*: In short, that pasture which improves the quality of the wool is certainly best adapted to the welfare of the Sheep; as that country which is the coldest produces the finest wool.

Notwithstanding what has been advanced by a correspondent, that he had tried the large fine wooled Sheep, and that they did not answer in the muir-lands, on account of their being naked when lambed, and, therefore, could endure no stormy weather for some time after, I am thoroughly convinced, that a well-wooled tup and ewe never fail to produce lambs properly cloathed to protect them from the weather, wherever dropt. The great Author of nature has provided a covering suitable to all the brute creation, according to the climate they inhabit. Even our domestic animal the dog, as much as he is with us at the fire-side, takes on a much thicker and warmer coat in the winter than he does in the summer; and the colder and more
severe

severe the winter is, the thicker will be his cover. It is likewise to be observed, that the skins of hares, rabbits, and all the species of *fur-red* animals, are more valuable by 50 per cent. in winter than they are in summer. My worthy correspondent may therefore assure himself, that nothing more is necessary to produce good wool, and in abundance, from a good breed of fine-wooled sheep, than to provide them with plenty of proper, wholesome food *, and a convenient shelter in stormy weather.—But farther; the fine-wooled Sheep never cast their wool unless they be starved for want of food, carried to a hot climate, or when they are very old; and it is not only my opinion, but that of the most intelligent farmers, that it is hardly possible to get too fine a breed for muir-farms. Extremes in any thing seldom answer; but this is erring, if erring at all, on the right side. A tolerably fine-wooled Sheep will thrive on the same pasture, equal with a coarse-wooled one,

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and

** The best winter food for sheep is turnips; next to these fitches, which improve them very much.—Hay should always be given them when the ground is covered with snow, and even when it is going off: But turnips may not only be given to them all winter, but even in the spring.*

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and will carry as much wool; with this additional advantage, that a fleece of the former is worth at least twice as much as the latter, which alone is certainly a sufficient inducement for Sheep-farmers, upon high lands, to procure a proper breed.

There are many gentlemen in the Mearns, and the adjacent counties, who have a good breed of fine-wooled Sheep; among whom I shall take the liberty of mentioning Sir Alexander Ramsay, Bart. Robert Barclay of Urie, Esq; David Scott of Benholm, Esq; and many others: And at Kirriemuir, and over all that part of the country, hardy good-wooled Sheep may be had: but depend upon it, if they are not well fed they will shed their wool, as all Sheep must in this situation; and those which are worst cloathed will be soonest gone. The better the wool, and the larger the quantity, the hardier and stronger the Sheep are to withstand wet and cold; and believe me it is nothing but scarcity of food that causes the rot, and almost all the disorders commonly found among these useful animals.

A late author, and surveyor of Tweeddale, who most ridiculously as well as absurdly contends, that the bettering the breed of Sheep would be
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a great loss to the country (a doctrine repugnant to common sense, and inimical to the welfare of Scotland), misconstrued the meaning of what I said with regard to the Sheep in Tweeddale. I never recommended *large* Sheep; nor Sheep from a warm climate. I advised the store-farmers to get Sheep that bore better wool than the majority in that county do at present; and such I informed them might be had from Lammer-muir, which, this author says, is much colder than the hills in Tweeddale, by the *frigid blasts*, and *frost rinds*: but certain I am, the wool of the Sheep at Lammer-muir is much better than usual; the farmers are improving it by tarring less, and feeding better by not overstocking their farms. The bruiked-faced Sheep, so much raised in Tweeddale, bear the worst wool of any Sheep in Britain; neither are they hardier than the white-wooled, short-legged Sheep, which are now raised in the highest and coldest grounds in Scotland.

The advantages that will result to posterity by improving the breed of Sheep, will hereafter be more particularly pointed out when I come to treat of the Woollen Manufacture; and those that will immediately accrue to the breeders will appear from the following facts, collected

to illustrate and support my present arguments.

A noble Lord, a small distance from Edinburgh, has a breed of Sheep, partly from Spain, and partly from Dorsetshire, and other counties in England, which thrive and feed fat on his poorest pasture, none of which have died of the rot, nor any other distemper, these four years past. This favourable circumstance may justly be attributed to the Sheep not being tarred, of which practice his Lordship highly disapproves. It is also attended with another advantage; that while his neighbours' wool brings only three shillings and sixpence *per stone*, his Lordship sells his at twenty shillings. Each Sheep, on an average, is supposed to yield eight pounds of tallow, and to weigh sixteen pounds *per quarter*, of the finest mutton; being infinitely better than that where the Sheep have been tarred.—By a simple operation, and at a small expence, these Sheep manure the very land they feed upon, which is thus effected. His Lordship makes a temporary fold of strong netting, of about 30 yards square, fixed to the ground with poles, within which they lie during the night; and when that space is properly manured by their dung, &c. the fold is removed to another spot. Thus five score of Sheep will
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convert into good corn land eight or ten acres annually ; and sixty acres of this coarse ground will do much towards feeding these fine-wooled Sheep, by laying it down in the following manner ; that is, twenty acres in turnips, twenty in oats, ten in fitches, and ten with rye and small yellow clover.—These Sheep drop their lambs (which are often twins) in *January* ; and the same ewes frequently drop twins again in *September*; the *first* of which, in January following, being then a year old, bring about fifteen shillings, and the *last* (dropt in September), about half that sum. Surely ground cannot be more advantageously employed to the proprietor than in this manner ; and the plan is likewise so plain and simple, that, I presume, it will soon be generally adopted by all the gentlemen and farmers in this country.

The following remarkable story corroborates what is above-mentioned, the authenticity of which, as it cannot be doubted (being at liberty to mention the gentleman's name), so I could not omit taking notice of it, though to some it may appear incredible.—Mr Chalmers, in the neighbourhood of Leith, who had occasion to deal in feeding Sheep on the island of Inchkeith, bought his stock mostly from Galla water, which he found to answer very well, and generally sold his lambs for between five and eight shillings.

One of these lambs, however, being disordered, the Butcher would not give more for it than one shilling and four-pence. This was so very trifling a sum, that Mr Chalmers rejected the offer, and resolved to give the poor animal a chance for life, by allowing it to feed in a park with his cow. The Sheep, after remaining in this pasture only fifteen months, grew so very fat, that he was under the necessity of slaughtering it, when, to his great surprise, the beast was found to contain 24 lib. of tallow: each quarter of mutton weighed 23 lib. of the finest that could be eaten. The wool, likewise, was of so good a quality, that the skin brought no less a sum than seven shillings and six-pence. The person who sold it informed Mr Chalmers, that had his wife been in health, so as to have permitted her to make use of the wool in her own family, he would most chearfully have given half a guinea for it.—Can any crop of grain equal this in point of profit?—I believe not. The wool of this Sheep might, besides, have made cloth to the value of five pounds sterling, and employed and maintained an industrious family many weeks in manufacturing it.

The last instance I shall quote of the advantage accruing to those who improve their breed of Sheep, is from a judicious Farmer of great experience

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experience on the borders.—This gentleman, who, something more than twenty years ago, began to improve his breed of Sheep, by getting tups from Lincolnshire, used to sell his wool for ten shillings per stone, containing 24 lib. *English*, and at that time it took seven or eight fleeces to make a stone; whereas, but lately it took only five fleeces. Since that period he has continued to procure English tups; and his ewes, which twenty years ago were sold at ten shillings a-head to graziers to feed fat, now give sixteen and eighteen shillings, and weigh from 16 to 20 lib. per quarter. Four fleeces on an average now weigh a stone, which he sells from thirteen shillings, to fourteen shillings and six-pence.—I am farther informed by this gentleman, that those who buy his ewes give them grass in summer; that they take, at a medium, three shillings and sixpence worth of wool from each, feed them with turnips in winter, and sell them at Candlemas for twenty-seven, and twenty-eight shillings each; at which time, though only about two years old, they weigh from 20 to 24 lb. per quarter.

With respect to proper tups for improving the breed of Sheep, Mr Bakewell and Mr Chaplin have long been famous in this way; and I am authorized to say, that Messrs Culley's

Culley's * of Fenton, near Wooler in Northumberland, gentlemen of known abilities, and long experience in farming, and who have the finest breed of Sheep and Black Cattle in this country, have a kind of tups inferiour to none; especially if we are allowed to draw our opinion from the large annual demand they have for them from every part of Scotland. It perhaps may be doubted by some of my readers, though it is a stubborn fact, that a certain Nobleman in Scotland, well known, paid Mr Bakewell thirty guineas for the use of a tup one year, besides the necessary charges that attended his conveyance hither and back to Leicestershire, which was very considerable.—Messrs Culley's, who let their best tups at twelve guineas, have some very proper for improving our breed so low as five guineas for the season. Mr Chaplin's of Lincolnshire, and Messrs Culley's are better, in my opinion, than Bakewell's, being a stronger, short-legged, round-bodied Sheep, and such
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* These gentlemen, well known in this country, some little time ago made a tour through Scotland, to inspect into the present state of Agriculture. As I am informed they are about to publish their remarks, the public may expect something interesting on the subject.

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as carry large fleeces of good useful wool ; not indeed the finest sort, but fit to be used in most branches of the **Woolen Manufacture**.

It is the opinion of a person of long experience, who has one of the most extensive Sheep estates in Scotland, that the addition of only one shilling to the value of each Sheep, would increase the produce of land one hundred thousand pounds *sterling* a-year. If this be admitted, it is certainly a matter of no small importance to themselves, and their posterity, to try to mend the breed of their Sheep, in order to produce the above advantage, which would create real rent-rolls on their flocks, instead of imaginary ones on their tenants.

Certain it is, that an animal which supplies us with food and clothing is much more profitable than one which supplies us with food only. The Highlanders begin to be very sensible of this, and are therefore converting their grazing ground from feeding Black Cattle, into that for feeding Sheep. They are also endeavouring to mend their breed, by adopting the example of the nobility and gentry; who, to effect this, have spared no expence to import tups of the best kind from the above-mentioned gentlemen, by which means they have now Sheep, which,
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instead of producing only 2 or 3 lb. of coarse wool, yield 8 or 10 lib. of fine wool; and in lieu of mutton of 6 and 7 lib. a quarter, now 16 and 18 lib.; and yet these very Sheep do not require a fifth part more food to support them than the hungry, half-starved breed of this country. It is to *wool* that England owes its industry, wealth, greatness, and independence; and if the landed gentlemen of this country were universally to adopt the above measures, and improve the breed of their Sheep, it is not to be doubted but in due time Scotland would arrive at the same meridian of opulence and glory.

Before I conclude this section, which perhaps is already swelled to too great a length, I must beg leave to answer a few objections that have been started against increasing the number of Sheep in this country.—Some people imagine, if the number of Sheep were increased, it would be a mean of lowering the price of mutton, and, consequently, of lessening the value of land. This opinion, however, is very ill-grounded; for the wool alone, exclusive of the mutton, will sufficiently enable the tenants to pay their rents; and therefore, if mutton were reduced to half its present price, the tenant would be no sufferer, and the manufacturer and country in general would be greatly benefited. It is well known,

known, that the cheaper we can send our goods to a foreign market, the more certain and readier will be the sale. It is equally manifest, that the price of labour must be proportional to the dearness of provisions. If, therefore, the one can be reduced, the other naturally falls, as a consequence, under the same predicament; so that while the landed gentlemen are in no danger of losing by an increase of Sheep, every individual must receive great advantage from such a wise procedure.—But, on the other hand, supposing so many Sheep to be fed as to overstock our own market, no bad consequences would arise from it, as the overplus might be salted and sent to foreign markets, where (according to these gentlemen's false hypothesis, mutton being at a low rate at home) the cheapness of it would be sure to meet with a ready sale.—The most northern settlement in Europe, *Iceland*, subject to the King of Denmark, follows this practice. I have myself purchased salt mutton at Copenhagen, brought from that place, the fattest I ever saw, and which proved excellent of its kind. Let us not, therefore, be deterred from increasing the number of our Sheep, from the apprehension of its decreasing the value of land, or of being prejudicial to the tenant by overstocking our markets. The former can never happen; and if the latter should, a new branch of trade may be opened and established, that would
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give employment to an additional number of hands, and prove a fund of wealth to this country in general.

It may likewise be an objection, to increasing the number of our Sheep, that, by so doing we shall diminish the number of acres at present occupied in corn-land.—To this I answer, that millions of additional Sheep may be raised, without incroaching upon a single acre of land, capable of bearing corn, or rearing black cattle. Sheep are pastured to advantage where neither the one nor the other will thrive; nor can any method in Agriculture be pursued more capable of meliorating land, so as to produce corn, than by previously pasturing it with Sheep, whose dung is known to be a rich manure. Some speculative gentlemen, indeed, have fruitlessly endeavoured to raise corn upon grounds where it is next to an impossibility of ever ripening. Had they, in lieu of this, stocked them with fine-wooled Sheep, their returns would have been greater beyond comparison. Thus, while they might have benefited themselves to a degree of certainty, they would have contributed their share to the general good of the kingdom, by increasing the quantity of wool, which I always thought, and shall endeavour hereafter to demonstrate, ought to be the staple manufacture of this kingdom.

CHAP.

C H A P. I.

S E C T. II.

On the pernicious Custom of tarring Sheep.

THE subject of this section is of the greatest importance to the breeders of Sheep, and to the manufacturers of this country, namely, the proper growth, increase and management of wool. In vain may we expect to derive particular advantage from an increase of our Sheep, and the introduction of a proper breed, unless we pay equal attention to the culture of the wool. I should be happy to find my countrymen desist from that pernicious practice of daubing the Sheep with tar, as nothing tends so effectually to destroy the wool; and from which custom I hope to dissuade them by the most irrefragable arguments deduced from nature and experience.

In the first place, Nature, that just and friendly monitor, that sure and unerring guide, strongly forbids this barbarous custom. Has the Almighty Creator and Governor of the universe formed any living creature without bestowing upon it such a covering as is best suited to its

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existence? And shall we, finite creatures, pretend to amend his system? Depend upon it, whenever we make the attempt, we shall find ourselves egregiously mistaken.—The horse, the cow, and every beast of the field, even those which are merely domestic, the dog and cat, are they not furnished by that God of wisdom whose providence ruleth over all his works, with a warmer covering during the winter than the summer months? And shall weak presumptuous man call in question that providence, by adding to the covering of the Sheep what nature never intended, and reason forbids to be added? —To check our arrogance and presumption, let us turn our view to the most rigid northern climes, where we (born and fostered in this friendly region) could not exist; and see if the wild beasts be supplied with any artificial covering. None will dare to say they are: None will presume to think they require any. And when we further reflect, that the finest furs and beavers come from the coldest climates, which covering is of a closer texture than that of animals inhabiting a more southern clime, and, consequently, proportionably warmer,—we can no longer doubt, by the same analogy of reasoning, that Sheep in cold countries produce wool finer than those in warmer; and that the God of nature has provided every animal with a coat adapted

adapted to his preservation, in whatever part of the globe providence may have allotted him. Let us then no longer obstinately persist in the practice of that from which we are strictly enjoined, not only by our own interest, but also by the dictates of nature, reason, and humanity.

In discussing this matter I have hitherto deduced my arguments from nature, which I could easily have enlarged were I not assured, that common sense will allow these sufficient to overturn the idea of Sheep wanting any additional cloathing to that given them by nature. I shall now proceed, in the second place, to verify my assertion, from the touchstone of experience, that the *tarring* of Sheep is attended with pernicious consequences both to the wool and to the animals themselves.

Now if we enquire into the origin of the custom of tarring Sheep, and the reasons assigned for it, we shall be informed by the sticklers for the practice, that "It is to make the wool thrive; to beat off the rain, and to keep the Sheep warm during winter; or, to destroy the vermin, and cure the scab."—Notwithstanding the long prevalence of these delusive notions, I shall endeavour to prove the futility of them all.—And first, We are to inquire of

what nature or quality wool is, which being allowed to be *unctuous*, the substance that will agree best with it must partake of that quality; and by the same parity of reasoning, what suits best with the wool must also be best adapted to the welfare of the Sheep: Now, if it be true that wool thrives best in moisture, and that every other sort of moisture grows dry sooner than grease;—*grease*, (not tar) is certainly the best thing to promote the growth of wool. The false opinion that tar occasions a large produce of wool, has induced many farmers to lay it on so copiously, mixing with it little or no butter, that they have rendered the wool almost useless. It is long since I inveighed against the practice of tarring Sheep; and many sensible farmers, not deaf to conviction, tried the experiment, by leaving a certain number of their flock *untarred*; the consequence of which has been, that the Sheep not tarred throve better than those that were tarred; produced more and better wool, while the Sheep themselves were free from every disease.

But secondly, it is said, “Tar beats off the rain, and keeps the Sheep warm during winter.”——Nature, as I observed before, has taken care to fortify the brute creation with such cloathing as best suits the different climates in which

which they live ; and even to increase or diminish it, according as the change of seasons shall render it necessary. If any one, however, foolishly imagines that Sheep need some additional coat to beat off the rain, or screen them from the inclemency of the weather, the following experiment will prove the insufficiency of tar. Let him apply to his naked body, in the depth of winter, the skin of a Sheep that has never been tarred, and, at a convenient time afterwards, another that is tarred ; I am persuaded he will find the former much warmer than the latter : And can we entertain a doubt but it will have the same effect on the Sheep themselves ? This being really the case, and the skilful farmer wishing to keep his Sheep as much as possible from rain and cold, so necessary for their preservation, what can answer that purpose so well as the covering which kind nature has so amply provided for them ? But if this experiment will not satisfy him, let him take a handful of fine wool that was never tarred, and another that has undergone that operation ; let both be exposed to a heavy rain ; and let that handful of wool that best throws off the rain decide the point in question. Experience convinces me that the decision will go in favour of that which had never been tarred.—Much tar put on the coarse-wooled Sheep causes the wool to

shed; and instead of being serviceable to these valuable animals in rainy weather, every shower that falls wets them to the skin; whereas, grease, or any oily substance, rubbed on their backs defends them from the rain. It is also more natural to suppose there must be a properer degree of warmth in a fleece of good thick wool, than in a plaster of corrosive, glutinous tar, that adheres to the very skin during the most rigorous season. It is a melancholy fact, that some farmers have tarred their Sheep so much, that they have dropped down on the ground. In this case, if the pasture be not rich, and the Sheep very strong, the tar will remain on their backs all winter, and in the spring, when they should be fittest for sale, being in a bad condition, many of them die; for this load of tar on their backs disables them from seeking food, injures the quality of the wool, and, stopping the growth of it, instead of increasing its weight (the original intention of tarring), it really diminishes it, and leaves the cunning farmer a dupe to his avarice.—Tar, therefore, while it prevents the natural increase of wool, neither skreens the Sheep from rain, nor keeps them warm during winter.

In the last place, it is averred, that “Tar
“destroys the vermin and cures the scab.”——

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This is the most plausible proposition of the whole, carrying with it a colour of truth; and is, indeed, the only circumstance in which tar may be used, if used at all. Now as tar is undoubtedly prejudicial to the growth and quality of wool, as well as to the health of the Sheep, especially if laid on in large quantities; in what degree soever it be used, in the same proportion will the fleece be damaged, and the Sheep infected, though the effects, if used sparingly, may not be perceptible.—This being really the case, if, when Sheep are infected with the scab, or infected with vermin, we can administer a topical remedy (which shall be given at the end of this chapter), that will prove innoxious to the wool as well as the Sheep, in my opinion we ought entirely to reject the former, and most willingly embrace the latter.

I am sensible the tarring of Sheep has been long practised in this country, and that it is no easy matter to eradicate a custom which has become inveterate by time, especially among the lower class of people. To these I would beg leave to observe, that *their* grandfathers as firmly believed in witchcraft, as *they* are convinced that Sheep cannot live without being tarred: and many poor old women were shamefully burnt for being witches, for no other cause
but

but that they were more sensible than their neighbours. This inhuman practice has happily been long abolished; and may the tarring of Sheep soon be the same. The one is as ridiculous as the other was barbarous; nor can these poor people give any better reason for continuing it, than that their fathers and grandfathers did so before them. Those farmers, however, who will not adhere to reason, nor be convinced by arguments drawn from experience, I would advise them to be more parsimonious of tar, and less sparing of butter. Let them put at least 16 lib. of butter to a Scots pint of tar, allowing half a pound of the mixture to each Sheep; for depend upon it, the more butter and the less tar, the greater quantity, and the finer will the wool be, and will bring in any market a much greater price than tarred wool, and be more useful to the industrious manufacturer.

The noble Lord, whom I have already mentioned, makes use of no tar to his Sheep, nor does he smear them with any thing in lieu of it; and yet they thrive better than those of his neighbours who practise that method, and their wool sells at five times the price. Most of the gentlemen and experienced farmers, who breed Sheep in this country, now follow the example; and I hope the practice will soon become as general in
Scotland

Scotland as it undoubtedly is in England, and in every other country where they wish to have fine wool.—Nay, I will be bold enough to say, that if a calculation could be made of all the Sheep reared in the known world, it would be found that for one Sheep that is smeared with tar, ten thousand receive no other covering than what nature has given them. Tar is of such a hot, penetrating quality, that if you kill a Sheep a few days, nay even a few weeks after being smeared with it, and make broth of the mutton, you will have tar soup instead of mutton broth; in short, tar penetrates not only into the entrails of the Sheep, shewing the very streaks of the fingers where it had been laid on the skin; but even into the marrow in the bones, entailing endless misery upon these poor innocent animals.

Some farmers, in order to deceive the too credulous purchaser, bedaub their Sheep much with tar, to make them appear black, and then falsely declare it to be their natural colour. This low, mean artifice, as well as the base intention of tarring to make the wool heavier, being well understood, it is high time this cruel, tricking custom should be abolished.—Our American brethren, indeed, have for some time past made use of this *precious* ointment,
mixed

mixed with feathers, as a preservative for men; and I have no objection the practice should be continued to such as stand in need of it, convinced that *they* deserve to be smeared with tar, and such like dirt, much better than our poor harmless Sheep; and that, by this time, they would be glad of any covering. I would therefore humbly propose, that Government should allow them the same bounty for keeping their tar at home, as they do for sending it hither, as we can be supplied with plenty of it for every necessary purpose from Norway. I would also have Bostonians strictly enjoined to tar all the hogs, tups, rams and *cross-grown* beasts in that country; and that their vermin of clergy should be instructed to administer that *useful* salve to the bodies of their flocks, as soon as they are able to carry arms against God, their king, and mother country.

I should not have been so prolix on this subject, nor have swelled the present section to so great a length, were I not duly sensible of the importance of its object, which is, the total suppression of tarring Sheep. In the course of my two last tours, I was happy to find that this custom, so justly decried, was almost in disuse; and that the good effects thereof had been felt by those farmers, who had either laid it wholly aside,

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or who had mixed with the tar three times the quantity of butter they were wont to do; by which means the Sheep weathered the winter better, were more healthy, (not losing one Sheep now by disease for five they lost formerly), than when the cruel operation of tarring was more generally practised, and the wool much more in quantity, and infinitely better in quality:—Add to this, the labour and trouble they save the industrious manufacturer, who, notwithstanding inconceivable pains, can never bring tarred wool to its pristine purity. Now, as the only plausible reason for using tar is, when Sheep are infected with the *scab* or *vermin*; and, since I have proved that tar is very detrimental to the wool, I am clearly of opinion, the pernicious consequences, arising from the use of it, should induce us to lay it wholly aside; and in lieu of *tar* for the cure of the above diseases, allowing it to be an infallible remedy, either of the following ought to be substituted in its room.

Receipt for Scabbed Sheep.

I.

“ BOIL half a pound of Tobacco among six chopins of chamber-lie, and a handful of the tops of broom; strain off and bottle the liquid; to each
bottle

bottle put a gill of the spirit of turpentine : bore a hole through the cork and put a goose-quill in it ; shake the mixture through the quill upon the scab and round it. If the scab is hard it must be done twice."

N. B. A little *soft soap* * may be mixed with it ; and when the Sheep are rubbed over with it, it not only cures the scab, and destroys the vermin, but enables them to stand the winter, and frees them from most of the other diseases to which they are subject. It is further to be noticed, that the stems and refuse of tobacco answer exceedingly well for the above.

Receipt

* I have been told by a sensible, judicious farmer, that soft soap alone (which may be had at Leith of as good a quality as any where in Europe), applied to any part that is affected with itching or scab, removes it sooner than any article Sheep can be rubbed with. Indeed if we may judge by the materials of which it is made, it is certainly the best ingredient that can be applied to them, and if rubbed on in time, it never fails to remove the cause of the complaint.

*Receipt for killing the Maggot, and curing the
Scab in Sheep.*

II.

A GENTLEMAN of my acquaintance has investigated a composition for killing the maggot, and curing the scab in Sheep; which valuable article he sells at a very moderate price. I am ignorant myself of its component parts, otherwise the public should have been favoured with it; but as the expence of purchasing it is small, and its good effects known and experienced by many, my regard to my friend, and the public in general, oblige me to mention it, which I shall do by an extract from this Gentleman's letter to me of the 31st May, 1777.

"I HAVE also sent you a basket-bottle of an article which we rather improperly call *Brown Spirits*, it being an Oil which of late we have introduced into the Sheep countries for killing the maggot, and curing the scab in Sheep. It is a speedy and effectual cure for these complaints, besides being a very healthful application to the Sheep. A very rational farmer, last summer, mixed with this brown spirit about one third of train or whale-oil, which he finds takes

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off that extreme pungency of the *brown spirits* or *oil* in its application. The method of making use of it is, by sparingly anointing the parts of the Sheep affected with a feather dipped in those spirits mixed with train-oil. One application generally has the wished-for success, which in no wise injures the wool.—This same farmer, instead of *salving* his large flock with tar against winter, applied this mixture; the effect of which was, that not one Sheep died, altho' many of those he had *salved* did. You may think I puff it away like a quack-medicine; but as it has already been instrumental in saving the lives of hundreds, I may say thousands, of that useful animal, I wish to propagate its use for that purpose.—The Sheep-water in the keg sent herewith is the real spirit of tar, which we have lately begun to make for the same disorder; but as it has not been tried, we send it you *gratis* for experiment, not doubting its efficacy for the cure of the scab in any animal. We were obliged to give away the brown spirits at first, and with difficulty got the obstinate farmer to make trial of it.

Yours, &c."

N. B. Any person willing to try it, by sending to me shall have it without expence.

C H A P.

C H A P. I.

S E C T. III.

Of the Advantages of propagating Whins on Sheep-farms; and Thoughts on the Practice of burning Heather.

IN the last section I treated largely on the growth and management of wool, proving that nothing can answer so well as the natural covering of Sheep to secure them from wet or cold: I come now in the next place to recommend the propagation of whins on Sheep-farms, as affording a proper and convenient shelter for Sheep, keeping them from wet and the inclemency of the weather.

Our forefathers, who, it will be allowed, in some matters were as wise as ourselves, were so sensible of the favourable circumstances attending having whins or gorse on Sheep-farms, that a premium was given, by virtue of a Scots Act of Parliament, for propagating this shrub here, which was originally imported from France. The advantages accruing to Sheep-

farmers who have plantations of them are of no small moment; as they not only afford the Sheep a most comfortable protection from rain and cold (far preferable to housing them, which sullies and depraves the wool), but also, in tempestuous weather, prevent the hay from being blown off. A nobleman in the county of Fife, with whom I have the honour to be acquainted, told me that some of his old tenants had informed him, that their grandfathers remembered the time when there was not a whin in all Fifeshire; but that, sensible of the good effects arising from them to the Sheep, yielding food and shelter when most wanted, they had directed their attention to the propagation of this useful shrub. True it is, the production of it has been somewhat neglected in the Sheep-counties in the south of Scotland, where they are much wanted; but as its utility is well known, now that we are increasing the number and improving the breed of our Sheep, I also recommend a more general increase and propagation of whins, which, as I have already observed, while they shelter them from the most rigorous storm, offer them food edible and wholesome. Those who mean to propagate them should do it on a south exposure, upon a loamy, dry soil; and they may be raised to advantage from the seed, which should be sown in March.—Plantations of them in different parts

parts of the farm would preclude the necessity of housing the Sheep at night, which is exceedingly injurious to the quality of the wool.

Some gentlemen, instead of whins, recommend plantations of firs, as extremely useful in farms, affirming that they afford good shelter for Sheep, and are also convenient for laying down hay on the sides of them, in time of a storm, which they say would otherwise be blown off. Now, there is not a single advantage arising to Sheep from a plantation of firs, which is not derived from whins; although there are many issuing from the latter not competent with the former. Besides, every person in his senses must allow, that the drops of rain which fall from trees are certain destruction to Sheep; and as fir-trees afford no food, and at best but a dangerous shelter, whins, which have both these qualities (the last in a superlative degree), undoubtedly deserve the preference. For my part, I was never against planting of any kind, whether for shelter, use, or ornament; but I am sure, in the present case, firs should give place to whins; nor could I think I had discharged my duty to a grateful public, without drawing a comparative view of the qualities and advantages of both; leaving the judicious farmer

to adopt that method which reason and prudence shall suggest.

The next best shelter to whins is old heather: but as many farmers are in the practice of burning it, I shall offer my thoughts and sentiments on this subject.

It is an incontrovertible fact, that Sheep manure and improve the very ground they feed upon, and cause fine white clover, a native plant of Scotland, to spring up under their feet. Sheep's *tath* is the richest manure we have, except pigeon's dung; and experience teaches us, where Sheep go and *ted* among the heather, they enrich the ground so fast that the heather disappears gradually,—in a few years is totally eradicated, and is succeeded by a rich white clover. It is on this account that the most skilful, as well as the most extensive farmers are unanimous against burning it. As some, however, still adhere to this practice, so pernicious to the soil, I shall attempt to point out the advantages and disadvantages that attend it, and in what cases it may be done with propriety.

In the first place, it is said, there are many Highland farms that would not keep near so many Sheep, if the heather upon them were
not

not to be burnt. Old heather, they say, is of no farther use for Sheep than to serve as a shelter in bad weather, or in lambing time, it being so strong the Sheep cannot eat it; and experience teaches us it will stand an age without the least decay. In answer to this, let it be remembered, that for several obvious reasons, an extensive Sheep farm, having no heather upon it, is by far less valuable than one that is heathered. For, besides that young heather is allowed to be good for fattening Sheep, the *older* offers them a comfortable protection from the inclemency of the weather. It may, however, be proper to burn yearly a part of that which is very old, and consequently not edible, even on the highest part of the farm, provided there be a sufficiency of it left on the lower part for the above purposes. When, therefore, there is an useless quantity of old heather, and that the farmer chuses to burn it, let it be done in parcels about the beginning of September, when the ground is pretty moist, and then the burnt ground may produce good pasture; but otherwise, in burning the heather, you burn the soil, to the great detriment of the farm. It should, however, be observed, that heather growing upon a clayey soil, when burnt scarcely ever appears again; but that on mossy ground vegetates the faster, and with more luxuriance the oftener

it is burnt, and consequently is more fit for pasture.

Experience likewise teaches us, that heathy land, having a mixture of *earth* and *moss*, is capable of improvement. Large tracts of this sort, by being drained, and having the surface pared and burnt, and the ashes spread out with a mixture of *earth* and *lime*, have so meliorated the soil, as to yield very grateful returns both of corn and grass: But, when the surface is entirely moss, without any mixture of earth, it is nothing better than an inert, lifeless mass, without vegetative powers, incapable of bearing any thing else than heather and bent-grass, its natural produce. To bring tracts of muir-ground of this kind into a condition fit for vegetation, is a work of years, and attended with no inconsiderable expence; neither should the farmer attempt to raise any kind of grain from them, till the soil is improved, and brought into a state of activity by dung and lime. Dung, as it affords an additional nourishment to the soil, is productive of immediate advantage to the farmer; for, by its quick assimilation with the particles of earth, it raises a fermentation wherever diffused, and converts it into an active state fit for vegetation.—If the compost, however, be of several kinds, it should be often turned, that the different:

ferent materials of which it is composed may be thoroughly mixed and incorporated; and before it be put on the land, be allowed to ferment itself into its smallest particles (especially if the muir-ground be cold,) that its essence may be the more readily communicated to the soil, upon which it acts as a powerful stimulus. The best time to lay it on is in autumn preceding the sowing, ploughing it down immediately; from which mode of procedure, the dung being inseparably conjoined with the earth, the most favourable consequences will ensue.

Lime is not, like dung, attended with immediate improvement: It affords no additional nourishment to the soil upon which it is put: It is possessed of no vegetative principle; but communicates a stimulus to the principles of vegetation, of which the soil is naturally possessed; warming, quickening, and putting into action its dormant powers.—If the muir-land be somewhat dry and warm, the effects of lime may be perceptible in two years from the time of its application; but if wet and cold, not till three or four: For which reason it is more advisable to lime muir-fields before they are broken up than after sowing, and that at least one year before a crop be gathered.—Every farmer who studies his own interest will by no means pasture

ture his field in the autumn following, nor even in the spring; for the soil, not having acquired a degree of firmness sufficient to resist the tread of the cattle, the least reflection will point out the damage it must receive in this way, as well as afterwards by the frost; for the tender roots of the grass, being left almost without covering during the winter, will be destroyed, and the ensuing crop very scanty; whereas, by its being left unpastured, the field will be doubly advantaged by its covering in winter, and by its manure in the spring; and the succeeding crop will be more early and luxuriant.—But, to return to my principal subject:—

When I had occasion to cross the country, where heather had been burnt indiscriminately, with respect to soil, time, and other circumstances, I could discover no good effects from the practice; and unless it be done under the predicaments above-mentioned, common sense will convince us of its bad tendency. My opinion in this matter is not singular; it coincides with that of the most skilful in agriculture, who seem to be unanimous against burning it at all, and is therefore disused by all the gentlemen and farmers in the counties of Aberdeen, Mearns, and others adjacent. Mr Barclay of Urie, whose knowledge in farming will not be called in question

tion by any, is strongly of this opinion.—This gentleman has also experienced, that Sheep feeding on heathery ground, cause the heather to disappear gradually, and fine clover to spring up in its room. This change is justly attributed to the Sheep's *tath*, the quantity of which must be proportioned to the extent of the heathery ground intended to be improved; which may be effected in the following manner. Let the Sheep, well fed during the day, be led successively at night to a particular spot of heathery ground, confined in folds till the *tath* be of a certain thickness; the consequence of which will be, that the heather will gradually vanish, and fine grass succeed; and by a continuation of this practice, large tracts of land may be improved to great advantage.

It has been said by one of my correspondents, who requested a particular description of the soil improveable by Sheep's dung, that he had made the trial and found it ineffectual, even though the *tath* was four inches thick.—This might probably have been owing to the heather being very old, to the singular quality of the soil, or to some other latent cause. As for my part, I am not so experienced in farming as to know the various qualities of the soil in the different counties of Scotland; neither do I know on what particular

cular soil the effect contended for does not follow : but I have remarked in all places, where I had occasion to travel, that where the greatest number of Sheep are pastured, and proper folds erected for keeping them together, there white clover comes up much more luxuriant than in places not pastured with that useful animal, even though the soil of the former should be greatly inferiour to that of the latter ; which consequence can be attributed to nothing else but the Sheep's tath.

In my last tour I was agreeably surpris'd to find the face of the country had assumed a much better appearance than formerly. In Argyleshire in particular, the sides of the hills were in a much better plight than they were ever known to be, and displayed a verdure and exuberance (if I may be allowed the expression) unknown, till the inhabitants began to increase the number of Sheep. Similar causes will produce similar effects ; so that when the breeding, and increasing of the number of Sheep shall be generally adopted in our Highlands, the vast chain of hills (designed by providence for the propagation and maintenance of this precious animal), heretofore barren and desolate, will be covered with a rich pasture by the very Sheep themselves, who, while feeding on their produce, cause a succession
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of more abundant provision to vegetate for their own support, and at last voluntarily offer themselves as food and cloathing to ungrateful man.

For the still greater preservation of this animal, it will not be thought altogether improper to intimate, in this place, to the farmers in general, whose grounds are infested with foxes and eagles, that they ought to pursue the most effectual method to destroy and extirpate them. The gentlemen of the county of Sutherland have much merit in having assessed themselves, for this salutary purpose, in no less a sum than 463 l. 15s. 3d. *Sterling*, from the year 1769, to the 30th April 1777. According to the record books of the county, there appear to have been destroyed in this space no less than one thousand six hundred and sixty foxes, one hundred and ten cubs, and one hundred and forty-eight eagles; the separate premiums given for which were, for every fox and eagle five shillings, and for every cub one shilling and sixpence. —Before this was done no farmer durst risk a single sheep out at night; now they do it with safety.

A correspondent of mine informs me, that he had lately made use of the *nux vomica*, as a poison for foxes, with much success. He first re-

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duces it to powder with a rasp; and finds that four nuts make a sufficient dose. It is mixed with a piece of flesh about the size of a hen's egg. He then lays down the bait, and sticks into the ground a piece of wood, at the distance of a yard or two from it, to direct him where to find it next morning, in case it should not be taken away or eaten by a fox or eagle. The best enticement to draw a fox to the poison is, a piece of any sort of flesh (except that of dogs), or four or five haddocks, or indeed any kind of fish that have lain in a dung-hill for some days; the ranker the smell the better.

Besides eagles, there are other carnivorous birds of prey very destructive to Sheep, the lambs especially. I would therefore also recommend the free use of the gun, being clearly of opinion, that to deprive the farmer of this engine of destruction would be in a manner robbing him of his lambs, and consequently of his property. Were these methods to be generally followed, I am persuaded that in a few years there would not be a fox or an eagle left in the whole Highlands of Scotland.

I shall conclude this section with observing, that another great destruction to Sheep is, the number of useless dogs kept in the country.

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The increase of them is attended with no less dangerous consequences than that of foxes or eagles. It is a melancholy fact, that within these few years, three hundred Sheep, in the circuit of a few miles round Edinburgh, have been devoured or torn to pieces by these vermin. This calls out for the immediate interposition of some salutary law or tax to suppress the useless number. There is hardly a porter or chairman but must have his dog: and as many of them are not supplied by their owners with necessary food, it is natural to suppose they should betake them to the fields in search of it; where, impelled by the dictates of nature to satisfy a craving appetite, they fall upon the harmless Sheep, kill and devour them, to the prejudice of their owners, as well as to the loss of the country.

C H A P. I.

S E C T. IV.

*Of the proper Pasture and Management of
Sheep.*

IT will now be expected I should say something on the pasture fit for Sheep, and the manner of breeding and managing them. It seems to be generally admitted, and indeed what I have often observed, that hilly pasture (with which this country abounds), is the best adapted for Sheep, and in which they most delight. It is true we have some very fine corn-lands ; but these bear but a small proportion to our high grounds, which are only fit for pasturing Sheep and black cattle. Now, besides the vast tracts of high land in Scotland, which nature intended for no other purpose than what I have just mentioned, there are many thousand acres of land in tillage, that do not, at most, return the laborious husbandman three-fold, which, if converted into Sheep-walks, would be presently more lucrative to the tenants,

nants, and in future more advantageous to the landlords.—If the out-fields of extensive farms were all to be put to this use, the in-fields would soon be in much higher order, and better fitted for vegetation; as all the dung in the barn-yards, formerly thinly spread in scanty portions over the whole farm, might then be applied to the best land only.—Experience, which will point out the properest method of laying out the out-field lands of extensive farms into Sheep-walks, according to the variety of soils that may occur, will also demonstrate to the satisfaction of the essayist, which is the most advantageous to rear; corn, Sheep, or black cattle.

After all, though it must be acknowledged, that many gentlemen and farmers have greatly improved their lands within these few years; yet it will not be denied, that many have thrown away their money and labour, by endeavouring to make corn grow on a soil where nature never intended it should ripen. Land that lies one thousand feet above the surface of the sea in this country, will seldom, if ever, bring corn to perfection.—There are some particular dry spots that may, in very warm seasons, bring grain to maturity; but this is exceedingly uncertain, while you are always sure

of success, and a much more proportionable profit in raising, upon the same ground, either Sheep or black cattle. It is for this reason I beg leave to recommend the practice of the store-farmers in the western Highlands, who (as I am well informed by a gentleman who has frequently visited them within these ten years) have now very considerable spaces of these lands wholly occupied by Sheep, where formerly none were to be seen; and that from some of these Sheep-farms four thousand lambs have been sent to market in one year. The method of feeding and rearing Sheep in those parts answers so well, that two of the store-masters have purchased the property of what, a few years ago, they only rented.—The amazing success attending undertakings of this kind has induced many to embark in the same project; and large tracts of hills, which, not long ago, contributed little towards the rearing of black cattle (their only stock), are now covered with Sheep, from which are derived incredible profits. If this scheme succeeds in a particular district, it will certainly answer in other places enjoying similar advantages; and we all know there are many hundred square miles in the west and north parts of Scotland, equally capable of this transmutation, to further which should be the care of every well-wisher to his country. I

cannot

cannot help once more observing, that the Sheep have greatly improved the pasture upon these western hills, thereby increasing their own value, and producing wool of an incredible fineness. In short, those hills which a few years ago appeared to be nothing but barren, fapless heaths, are now, by the manure they receive from the dung of the Sheep, converted into a beautiful rich verdure, affording a most agreeable prospect, at the distance of several miles, and distinguishable from those that are not pastured with that useful animal.

Many things are necessary to be attended to by the breeders of Sheep; but as I do not pretend to be master of the subject, I shall deduce my arguments from authors who have professedly written on this matter; presuming my readers will not be displeased with the following curious and interesting extracts on the breeding of Sheep, from a letter written by a gentleman in Spain to Mr Peter Collinson, F. R. S.

“ THERE are two kinds of Sheep in Spain; the coarse-wooled Sheep, who remain all their lives in their native country, and who are housed every night in winter; and the fine-wooled Sheep, who are all their lives in the open air; who travel every summer from the cool mountains

tains of the northern parts of Spain, to feed all the winter on the southern warm plains of Andalusia, Manca, and Estremadura. From computations made with the utmost accuracy, it has appeared, that there are five millions of fine-wooled Sheep in Spain; and that the wool and flesh of a flock of ten thousand Sheep produced yearly about twenty-four reals a-head, which we will suppose to be near the value of twelve English sixpences. Of these but one goes clear a-head to the owner yearly; three sixpences a-head go yearly to the king, and the other eight go to the expences of pasture, tithes, shepherds, dogs, salt, shearing, &c.

“ Thus the annual product of the five millions of Sheep amounts to little less than thirty-seven millions and a half of sixpences, of which there are about three millions and a half for the owners, above fifteen millions enter into the treasury, and seven millions and a half go to the benefit of the public. Hence it is the kings of Spain call these flocks, in their ordinances, *The precious jewel of the crown.*

“ Formerly this jewel was really set in the crown. A succession of many kings were the lords of all the flocks. Hence the great number of ordinances, penal laws, privileges, and immunities,

munities, which issued forth in different reigns for the preservation and special government of the Sheep : Hence a royal council was formed, under the title of *The council of the grand royal flock*, which exists to this day, though the king has not a single Sheep. Various exigencies of state, in different reigns, alienated, by degrees, the whole grand flock from the crown, together with all its privileges, which were collected and published in the year 1731, under the title of *The laws of the royal flock*; a volume in large folio, of above five hundred pages.

“ The wars and wants of Philip I.’s reign forced that king to sell forty thousand Sheep to the Marquis of Iturbleta, which was the last flock of the crown.

“ Ten thousand Sheep compose a flock, which is divided into ten tribes. One man has the conduct of all. He must be the owner of four or five hundred Sheep, strong, active, vigilant, intelligent in pasture, in the weather, and in the diseases of Sheep. He has absolute dominion over fifty shepherds and fifty dogs, five of each to a tribe. He chuses them, he chastises them, or discharges them at will. He is the *præpositus*, or chief shepherd of the whole flock. You may judge of his importance by his salary : He has
forty

forty pounds a-year, and a horse; whereas the first shepherd of a tribe has but forty shillings a-year, the second thirty-four, the third twenty-five, the fourth fifteen, and a boy ten. All their allowance is two pounds of bread a-day each. They may keep a few goats and sheep in the flock; but the wool is for the master; they have only the lambs and the flesh. The chief shepherd gives them three shillings in April, and three in October, by way of regale for the road; and these are all the sweets these miserable wretches enjoy. Exposed every day in the year to all weathers, and every night to lie in a hut. Thus fare, and thus live, generally to old age, twenty-five thousand men, who clothe kings in scarlet, and bishops in purple; for that is the number computed to keep the fine-wooled Sheep of Spain, with the same number of dogs of the large mastiff kind, who are allowed two pounds of bread a-piece *per* day. I often saw these flocks in the summer sheep-walks of the hills and vales of Leo, Old Castile, Cuenca, and Arragon. I saw them in their winter plains of Manca, Estremadura, and Andalusia. I often met them in their peregrination from the one to the other. I saw and I saw again. One eye is worth a hundred ears. I inquired, I observed, and even made experiments. All this was done, when I happily got acquainted with a good plain old

old friar, who had a consummate knowledge of all the mechanical, low, minute circumstances and economy of a flock. He told me that he was the son of a shepherd; that he had followed, fifteen long years, the tribe of Sheep his father led; that, at twenty-five years of age, he begged an old primer; that at thirty he could read; that at thirty-six he had learned Latin enough to read mass and the breviary; that he was ordained by Don Juan Navarre, Lord Bishop of Albarrazin, who, as it is known, even to a proverb, in Spain, has ordained thousands, declaring, these forty years, in a loud voice, "That a priest is the most precious boon which a bishop can bestow, in the name of God, to mankind, even though he was as unlearned as an apostle." That thus ordained, he entered into the order of St Francis; that he had never meddled in their affairs these twenty-four years past, but only said mass, confessed, instructed, and gave an eye to about five hundred wedders, who grazed in the neighbouring downs for the use of the convent; that he had read the Bible, the lives of the Saints, and the lives of the Popes, with no other view in the world but to find out all that was said about shepherds; that good Abel was the first shepherd; that all the patriarchs were shepherds; that the meek shepherd Moses was chosen to deliver the people of
 God

God out of bondage; that Saul, in seeking his father's flocks, found a kingdom; that David went out from his flock to slay the Philistine giant; that fourteen thousand Sheep was the chief reward Job received for his invincible patience; that Isidro, the protecting saint of Madrid, was not, as it is vulgarly believed, an husband-man, like wicked Cain, but that he was really a keeper of Sheep; that the great Pope Sixtus Quintus was verily and truly a shepherd, and not a swine-herd; that, for his part, he had forsaken his Sheep to become a shepherd of men. He had all these things by heart, just as he had all the minute circumstances of the Sheep he followed; and this letter would have been imperfect had I not met with him.

“The first thing the shepherd does, when the flock returns from the south to their summer downs, is to give them as much salt as they will eat. Every owner allows his flock of a thousand Sheep one hundred aroves, or twenty-five quintals of salt, which the flock eats in about five months. They eat none in their journey, nor in their winter-walk. This has ever been the custom; and it is the true reason why the kings of Spain cannot raise the price of salt to the height it is in France; for it would tempt the shepherds to stint the Sheep, which,
it

it is believed, would weaken their constitutions, and degrade the wool. The shepherd places fifty or sixty flat stones at about five steps distance from each other; he strews salt upon each stone; he leads the flock slowly through the stones, and every Sheep eats to his liking: But then they never eat a grain of salt when they are feeding on lime-stone land, whether it be on the grass of the downs, or on the little plants on the corn fields after harvest-home. The shepherd must not suffer them to stay too long without salt; he leads them into a spot of argillaceous, clayey soil, and in a quarter of an hour's feeding they march to the stones, and devour the salt. If they meet a spot of the mixed soil, which often happens, they eat salt in proportion. Ask the shepherd why the Sheep eat no salt in lime-stone soil, and but little in the mixed? Because, Sir, it is corn land. I know, and indeed who does not know, that lime abounds in saline matter? But then the salt, which chymists extract from it, may not be the genuine salt of the lime-stone before calcination, for the fire may form new combinations. It may be sea-salt, or at least the muriatic acid, which rises in the vegetation of grass, and satisfies the Sheep's taste for salt. The latter end of July the rams are turned into the tribe of ewes, regulated at six or seven rams for every hundred. When

the shepherd judges they are served, he collects the rams into a separate tribe to feed apart: But then there is another tribe of rams that feed apart too, and never serve the ewes, but which are merely for wool, and for the butchery; for, though the wool and flesh of wedders are finer and more delicate than those of rams, yet the fleece of a ram weighs more than the fleece of a wedder, who is likewise shorter-lived than the ram; which compensation is the reason there are so few tribes of wedders in the royal flock of Spain. The fleeces of three rams generally weigh twenty-five pounds: There must be the wool of four wedders, and that of five ewes, to weigh twenty-five pounds. There is the same disproportion in their lives, which depend upon their teeth; for, when they fail, they cannot bite the grass, and therefore are condemned to the knife: The ewes' teeth, from their tender constitutions, and the fatigue of breeding, begin to fail after five years of age, the wedders after six, and the robust rams not till towards eight. It is forbidden to expose ram's flesh to sale; but the law is eluded, they cut the old rams; and as soon as the incision is healed, they are sold to the butchers at a lower price than coarse-wooled wedders. That is the reason such bad mutton is generally eaten in Madrid, and that is the reason there are more

rams

rams and fewer lambs stones sold and eaten every day in the year in Madrid, than in the rest of Europe.

“ At the latter end of September they put on the redding or ochre. It is a ponderous irony earth, common in Spain. The shepherd dissolves it in water, and daubs the Sheep's backs with it from the neck to the rump. It is an old custom. Some say it mixes with the grease of the wool, and so becomes a varnish impenetrable to the rain and cold; others, that its weight keeps the wool down, so hinders it from growing long and coarse; and others, that it acts as an absorbent earth, receives part of the transpiration, which would foul the wool, and make it asperous.

“ The latter end of September the Sheep begin their march towards the low plains. Their itinerary is marked out by immemorial custom, and by ordinances; and is as well regulated as the march of troops. They feed freely in all the wilds and commons they pass through; but as they must necessarily pass through many cultivated spots, the proprietors of them are obliged by law to leave a passage open for the Sheep, through vineyards, olive-yards, corn-fields, and pasture-land common to towns; and these passages must be at least ninety yards wide, that

they may not be too crowded in a narrow lane. These passages are often so long, that the poor creatures march six or seven leagues a-day to get into the open wilds, where the shepherd walks slow to let them feed at ease and rest; but they never stop; they have no day of repose; they march at least two leagues a-day, ever following the shepherd, always feeding or seeking with their heads towards the ground, till they get to their journey's end, which, from the Montana to Estremadura, is about one hundred and fifty leagues, which they march in less than forty days. The chief shepherd's first care is, to see that each tribe is conducted to the same district it fed on the year before, and where the Sheep yeaned, which they think prevents a variation in the wool; though, indeed, this requires but little care; for it is a notorious truth, that the Sheep would go to that very spot of their own accord. His next care is, to fix the toils *, where the Sheep pass the night, lest they should

* *The toils are made of Sparto, in meshes a foot wide, and the thickness of a finger, so that toils serve instead of hurdles. The whole square toil is light. Sparto is a sort of rush, which bears twisting into ropes for coasting vessels. It swims; hemp sinks. It is called Bos by the English sailors.*

should stray, and fall into the jaws of wolves. Lastly, the shepherds make up their poor huts with stakes, branches, and brambles; for which end, and for firing, they are allowed, by the law, to cut off one branch from every tree. I believe this to be the reason that all the forest-trees, near the Sheep-walks in Spain, are as hollow as willow-pollards. The roots of trees, and the quantity of sap, increase yearly with the branches; if you lop off these, all the sap that should go to the annual production, and to the nourishment of buds, stems, leaves, flowers, fruit, and growth of the branches, remains in the trunk; from hence stagnation, fermentation, and rottenness. Next comes the time when the ewes begin to drop their lambs, which is the most toilsome and most solicitous part of the pastoral life. The shepherds first cull out the barren from the pregnant ewes, which are conducted to the best shelter, and the others to the bleakest parts of the district. As the lambs fall, they are led apart with their dams to another comfortable spot. A third division is made of the last yeaned lambs, for whom was allotted, from the beginning, the most fertile part, the best soil, and sweetest grass of the down, that they may grow as vigorous as the first yeaned; for they must all march the same day towards their summer quarters. The shepherds perform four operations

rations upon all the lambs, about the same time, in the month of March; but first they pay the twentieth lamb; the other half tithe is paid in the winter walk. They cut off their tails five inches below the rump for cleanliness: They mark them on the nose with a hot iron: They saw off part of their horns, that the rams neither hurt one another nor the ewes: They render impotent the lambs doomed for docile bell-wethers, to walk at the head of the tribe; they make no incision; the shepherd turns the testicles with his finger twenty times about in the scrotum, till he twists the spermatic vessels as a rope, and they wither away without any danger. As soon as the month of April comes about, which is the time of their departure, the Sheep express, by various uneasy motions, a remarkable restlessness, and strong desire to go off. The shepherds must exert all their vigilance lest they should escape; and it has often happened, that a tribe has stolen a march of three or four leagues upon a sleepy shepherd; but he is sure to find them, for they return exactly the same way they came; and there are many examples of three or four strayed Sheep walking a hundred leagues to the very place they fed in the year before. Thus they all go off towards the summer mountains in the same order they came; only with this difference, the flocks
that

that go to Leo and Castile are shorn in the road ; where we will stay a little to see the apparatus of this operation, whilst the other flocks march to Molina Arragon. They begin to shear the first of May, provided the weather be fair ; for if the wool were not quite dry, the fleeces, which are close piled upon one another, would ferment and rot. It is for this reason that the shearing-houses are so spacious. I saw some which can contain, in bad weather, twenty thousand Sheep, and cost above five thousand pounds sterling : besides, the ewes are creatures of such tender constitutions, that, if they were exposed immediately after shearing to the air of a bleak night, they would all perish.

“ There are one hundred and twenty-five shearmen employed to shear a flock of ten thousand Sheep ; a man shears twelve ewes a-day, and but eight rams. The reason of this difference is, not only because the rams have larger bodies, stronger and more wool ; but the shearmen dare not tie their feet, as they do those of the unresisting ewes. Experience taught, that the bold rebellious ram would struggle even to suffocation in captivity under the shears : they gently lay him down, they stroke his belly, they beguile him out of his fleece. A certain number of Sheep are led
into

into the great shelter-house, which is a parallelogram of four or five hundred feet long, and one hundred wide, where they remain all day ; as many as they judge can be dispatched by the shearmen next day, are driven from the shelter-hall into a long, narrow, low gut, which is called the *sweating-place*, where they remain all night, crowded as close together as the shepherd can keep them, that they may sweat plentifully, which, as they say, is to soften the wool for the shears, and oil their edges. They are led by degrees, in the morning, into the spacious shearing-hall, which joins the sweating-room. The shepherd carries them off as fast as they are sheared, to be marked with tar ; and as this operation is necessarily performed upon one at a time, it gives a fair opportunity to the shepherds to cull out for the butchery all the sheep of the flock who have outlived their teeth. The sheared Sheep go to the fields to feed a little, if it be fine weather, and they return in the evening to pass the night in the yard before the house, within the shelter of the walls ; but if it be cold and cloudy, they go into the house. They are thus brought by degrees to bear the open air ; and their first days journies from the shearing-house to the mountains are short : where we will leave them to conclude their annual peregrination, and go see how fare the flocks of

of Molina Arragon, which have by this time got thither. But while the mule is saddling, a word of the shorn wool.

“ The Sheep and shearers dispatched, the first thing done is, to weigh the whole pile of wool: the next is, to divide each fleece into three sorts of wool; the back and belly give the superfine; the neck and sides give the fine; the breasts, shoulders, and thighs, the coarse wool. A different price is fixed upon three classes, though the general custom is, to sell the whole pile together at a mean price. It is sold after it is washed, when it is to go out of the kingdom, or to any considerable distance in it; for, as it never loses less than half its weight in washing, and often more when the sweating is violent, half the carriage is saved.

“ Thirty-one leagues S. E. of Madrid, and five leagues S. of the source of the river Tagus, is the town of Molina Arragon, capital of a lordship of the crown, which is twelve leagues wide, as many long, and almost in the center of Spain. The highlands of this little territory are covered with pine-trees; the lowlands feed about one hundred and fifty thousand Sheep. Here I learnt some truths which prove that the
three

three following opinions should be ranked among vulgar errors.

“ 1. That Sheep eat and love aromatic plants, and that the flesh of those that feed on hills where sweet herbs abound, has a fine taste.

“ 2. That salt springs are not found in the high primitive mountains, but in the low hills and plains only.

“ 3. The metallic vapours destroy vegetation, that no rocks nor mountains, pregnant with rich veins of ore, are covered with rich vegetable soil.

“ As my duty obliged me to pass hundreds of days at the Platillo mine of Molina, I saw thousands of Sheep feed around it. I observed that, when the shepherd made a pause, and let them feed at their will, they sought only for the fine grass, and never touched any aromatic plant: that when the creeping serpillum was interwoven with the grass, the Sheep industriously nosled it aside to bite a blade, which trouble made them soon seek out a pure gramineous spot. I observed too, when the shepherd perceived a threatening cloud, and gave a
signal

signal to the dogs to collect the tribe, and then to go behind it, walking apace himself to lead the Sheep to shelter, that, as they had no time to stoop, they would take a snap of *stæchas*, *rosemary*, or any other shrub in their way; for Sheep will eat any thing when they are hungry, or when they walk fast. I saw them greedily devour *henbane*, *hemlock*, *glaucium*, and other nauseous weeds, upon their issue out of the shearing-house. If Sheep loved aromatic plants it would be one of the greatest misfortunes that could befall the farmers of Spain. The number of bee-hives is incredible. I am almost ashamed to give under my hand that I knew a parish priest who had five thousand hives. The bees suck all their honey and gather all their wax from the aromatic flowers, which enamel and perfume two-thirds of the Sheep-walks. This priest cautiously seizes the queens in a small crape fly-catch; he clips off their wings; their majesties stay at home. He assured me that he never lost a swarm from the day of this discovery to the day he saw me, which I think was five years.

“ The shepherd’s chief care is not to suffer the Sheep to go out of their toils till the morning sun has exhaled the dew of a white frost, and never let them approach a rivulet or pond
after

after a shower of hail ; for if they should eat the dewy grass, or drink hail-water, the whole tribe would become melancholy, pine fast away, and die, as often happened. Hail-water is so pernicious to men in this climate, that the people of Molina will not drink the river water after a violent shower of hail ; experience taught the danger : but let it be ever so muddy, and rise ever so high after rain, they drink it without fear. Perhaps this may be the unheeded cause of many endemical epidemics of other cities. The Sheep of Andalusia, who never travel, have coarse, long, hairy wool. I saw a flock in Estremadura, whose wool trailed on the ground. The itinerant Sheep have short, silky, white wool. I do believe, from a few experiments, and long observation, that, if the fine-wooled Sheep staid at home in the winter, their wool would become coarse in a few generations. If the coarse-wooled Sheep travelled from climate to climate, and lived in the free air, their wool would become fine, short, and silky, in a few generations.

“ The fineness of the wool is due to the animal's passing its life in an open air of equal temperature. It is not colder in Andalusia and Estremadura in the winter, than it is in the Montano or Molina in summer. There is little
frost

frost in Andalusia. Sometimes it snows in June in Molina. I felt a cold day upon the least cloud in summer. Constant heat, or constant cold, with housing, are the causes of coarse, black wool. All the animals I know, who live in the open air, constantly keep up to the colour of their fires. There are the most beautiful brindled Sheep in the world among the coarse-wooled Sheep of Spain. I never saw one amongst the fine-wooled flock. The free, but less abundant perspiration in the open air, is swept away as fast as it flows; whereas, it is greatly increased by the excessive heat of numbers of Sheep, housed all night in a narrow place. It fouls the wool, makes it hairy, and changes its colour. The swine of Spain, which pass their lives in the woods, are all of one colour, as are the wild boars. They have fine, silky curled bristles. Never did a Spanish hog's bristle pierce a shoe. What a quantity of dandruff is daily secreted from the glands of a stabled horse! the curry-comb and hair-cloth ever in hand: How clean is the skin of a horse that lives in the open air!"

Richard Twiss, Esq; who has lately published travels through Portugal and Spain, agrees with the gentleman above quoted, and gives us the following passage on that subject:

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" March

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“ March 11. The road over which we travelled this day was somewhat hilly ; we arrived at noon at the city of Segovia, which stands on a hill, at the foot of which runs the small river Eresma. Segovia is walled, and is about eighty miles distant from Valladolid. Between Olmedo and this city we saw vast numbers of Sheep, the wool of which is accounted the finest in Spain. I made enquiry about the Sheep-walks, and concerning the method of managing these animals, of which a very just account is given by the Abbe de la Porte, in the sixteenth volume of his *Voyageur Francois*, printed in Paris in 1772. It is as follows :

“ Numberless flocks of Sheep cover the plains of Segovia, and produce that excellent wool, which makes such an important branch of the commerce of Spain. The kings were anciently the proprietors of the greatest part of these flocks ; they have been successively alienated for state exigencies. Philip I. was obliged to sell the last fourteen thousand Sheep, which belonged to the crown, to defray the expences of war. They are, however, still the object of the government's particular attention : In effect, there is a considerable exportation of wool, which is used all over Europe. Does its superiority depend only on the climate, or on a particular method

method of managing the Sheep? Those that embrace the latter opinion say, that there are in Spain two sorts of Sheep, very different in their fleece, though they appear to be of the same breed. The Sheep with coarse fleeces remain all the year in the same place, and in the winter nights they are shut up in a fold. On the contrary, the others live always in the open air, and travel twice a-year. During the summer they stray on the mountains of Leon, of Old Castile, of Cuenca, and of Arragon: They pass the winter on the temperate plains of la Mancha, Estremadura, and Andalusia. According to very exact calculations, there are reckoned in Spain more than five millions of those travelling Sheep with fine wool. It may easily be imagined how much care, intelligence, and activity is requisite from those who have the charge of conducting those vast flocks.

“ They must take particular heed not to let them want salt, especially after their return from the south to their summer pasturages. That commodity keeps them in health, and hardens their constitution, which contributes infinitely to the beauty of the wool. After having passed the winter in a temperate climate, they set out in the month of April for the mountains.

“ The Sheep themselves show their desire of changing their place, by many unquiet motions; and that desire is so strong, that the shepherds must be very watchful to prevent their escaping.

“ They begin to shear them in the month of May, either on the road or after their arrival. It is necessary to wait for fine weather; for if their wool was not dry enough, the fleeces being piled on each other would ferment and spoil. Towards the end of July, the number of rams necessary for propagation are mixed with the Sheep. Six or seven rams are sufficient for a hundred Sheep: Out of a numerous flock of rams, the strongest and handsomest are chosen for that purpose. There are in general very few Sheep in these travelling flocks, though their wool is finer, and their flesh better than that of the rams; but the fleece of these is heavier, they live longer, and by that means their total product is more considerable. It is esteemed very essential to besmear these animals in the month of September, from the neck to the root of the tail, with a ferruginous earth mixed with water. It is said that this unguent, mixing with the grease of the wool, becomes impenetrable to rain and to cold, and that it absorbs part of the transpiration, which would otherwise render the fleece rough and coarse. At the

the end of September the Sheep begin their march towards the lower plains. They travel one hundred and fifty leagues in forty days. When the time comes that the Sheep drop their lambs, the shepherds first separate those which are sterile from those which are fruitful: These are guided to the best places of shelter, and those to the coldest parts of the district. The spots which produce the best and most abundant herbs are also allotted for the youngest lambs, that, by being fortified with good food, they may be able to depart with the others. The tail is cut off within five inches of the rump to keep them the cleaner. It is an error to believe that the Sheep prefer aromatic plants to others, and that they are more beneficial to them. It is the tender herbs that grow between those plants, that afford the most wholesome nourishment for them, and that give a good taste to their flesh. They must never be led to feed till the sun has dissipated the morning dew, and must not be allowed to drink immediately after a hail storm, because that water, or wet grass, renders them melancholy, and makes them languish and die.

“ It appears then to be certain, that the superiority of the wool in this country is not to be attributed to the climate only; and that it de-

pende in a great measure on the precautions above-mentioned ; because, in the same climate, the Sheep of Andalusia, which are of the same breed, but which are not taken the like care of, have their wool much coarser. Would it be advantageous in other countries to allot large tracts of land for the pasturage of these animals? and would it be as much so to the proprietor, as if he had made those lands serve for other purposes? To these countries where lands are successively cultivated, flocks of Sheep must be considered more for the use they are of to agriculture, than for their fleeces. Dung is there much more necessary than wool. The travelling Sheep furnish no manure when they wander in the mountains, so that they must be confined together in lands which require cultivation."

Though I will not pretend to determine how far a similar mode of conduct, as to pasturing Sheep, ought to be followed in this country, yet I humbly think, that several very useful hints may be gathered by the speculative farmer from a serious perusal of the above passages ; especially with regard to the proper time of slaughtering them, which should never exceed that when nature has so far rendered useless their teeth as to disable them from eating a sufficient quantity of food to fatten them. I recommend

commend a due observance of this particular, as well as a speedy and general trial of giving them *salt*, like the French and Spaniards. The effects it produces on Sheep and black cattle, shall be a subject of inquiry in my next section.

Before I conclude the present one, I wish to convince you, that the Spaniards have long considered *Sheep* and their produce as the most valuable jewel in the crown. The English nation, whose wisdom no one will dispute, have been of the same opinion for many ages. Her sages have, with the greatest reason, preferred the cultivation of wool to mines of silver or gold; as it employed the heads and hands of the ingenious and industrious, and brought an inexhaustible fund of wealth into the kingdom, which could be derived from no other source.—Conscious of its being the staple and glory of England, they have ordered that their supreme judges, when convened together in the great council of the nation, should be seated on wool-packs; that care should be taken never to export any wool, until manufactured into cloth; that none of the breed of their Sheep should ever be allowed to be carried to foreign parts; that the exportation of either Sheep or wool should be a capital crime, and every person discovered to be any way concerned in it, despised,
looked

looked upon as an enemy to his country, and branded with public infamy and disgrace. Nay, so much was their attention carried to the encouragement of this invaluable branch (indeed it is of more real consequence, and yields more profit, than all the trade of England besides), that they will not suffer their dead to be buried in linen, the staple of poor Scotland, but all in woolen, in order that the consumption of this precious manufacture might not cease with the living, but even be sent to the grave with the dead.

That wise nation has been equally attentive to procure every ingredient made use of in this branch of trade at the cheapest rates. For this purpose, all drugs, dye-stuffs, and every other article used in the woolen manufacture, are allowed to be imported into every part of Great Britain, duty free; while our fancied and visionary staple, the *Linen*, is burdened with a very high duty on every article consumed in it, the rough flax alone excepted, on which, notwithstanding, there are considerable charges, as shall be shewn in its proper place. Now, if gold flows in from every quarter to our sister kingdom, for the produce of the woolen manufacture, let us imitate her conduct, by vigorously prosecuting this lucrative branch, since the advantages

vantages of nature and art favour our attempts. If this were once firmly established among us, poverty and wretchedness would no longer haunt our streets, joy and plenty would flow through the land, and chearfulness preside over every countenance. Many patriots have nobly stretched forth their generous arms to lay the foundation; perseverance will raise, and complete the superstructure of that edifice, which will render Scotland the glory, wonder, and terror of the world.

CHAP.

C H A P. I.

S E C T. V.

Of the effects of Salt in fattening Cattle.

HOWEVER strange it may appear to some persons, it is beyond a doubt that Salt not only fattens Sheep, preserves their health, and hardens their constitution, but likewise contributes greatly to the fineness of their wool.—Those who are dubious of the fact may convince themselves by experiment. A trial of this kind may be made with very little expence; and if not found to answer the expectations conceived from it, the practice can be discontinued, while the essay is void of danger. If salutary consequences ensue, as I am sure would be the case, the practice ought to be generally adopted; particularly, as salt might be given to cattle when hay is either too dear to be purchased, or very difficultly procured.

In the Memoirs of the Royal Academy of Sciences at Paris, there is a paper intitled
Physical

Physical Observations on the effects of Salt in fattening Cattle. As I know some farmers who are experimentally convinced of its salutary effects, I think it my duty to give some extracts of the above performance, having for its end objects of the most important kind ; which are, the improvement of land, and the increase of cattle. It is a self-evident truth, that by increasing cattle, lands may be improved ; and by improving lands, cattle may be multiplied.

That farmer who has a more than ordinary stock of working cattle, reaps a double advantage ; the one by having his work done in season ; the other, by enriching a greater proportion of his land, by mean of his additional manure. The only difficulty is, how to maintain an increased number, without increasing the expence.—This, with a degree of plausibility next to conviction, is affirmed may be done by the use of salt ; to the purport of which are advanced the three following propositions :

1. That salt, given with the food of cattle, augments the nourishment of that food.

2. That, in proportion to the quantity of salt eaten by cattle, the effects of that augmentation will be perceivable.

3. That

3. That no ill consequences will follow from excess of salt eaten by cattle, even though it should be given them without stint.

These propositions are supported by the following unquestionable facts.

In the jurisdiction of Arles, in the county of Provence, there is a district called the Crau, extending in length about six leagues, and in breadth about three; the whole surface of which is covered with small rough stones, and not a tree or bush is to be seen in the whole district, except here and there on the borders; yet on this spot, so seemingly sterile, by the free use of salt, more numerous flocks of Sheep are bred and reared than upon any other common, of equal extent, throughout the whole kingdom: And, what is no less remarkable, the Sheep are healthier, hardier, and endure the severity of the winter with less loss, though they have fewer Sheep-cots for covering than those bred, and fed, on more copious pastures; and that have, besides, the advantage of more convenient shelter. Add to this, that the wool of the flocks bred and brought up in the Crau, is not only the finest in the whole country, but bears the highest price of any in France. From hence he concludes, that it is to the unlimited
use

use of salt that these surprising effects are to be ascribed; for it frequently happens, that the Crau is so burnt up in summer, that the poor animals are forced to turn up the very stones to come at the few blades of grass that grow around them, and yet none perish for want of food. Let every excellence, therefore, that can reasonably be supposed inherent in the herbage, be ascribed to it, yet the quantity of it is so small, that, without the abundant use of salt, a fourth part of the Sheep kept in the Crau could not subsist in it.

But, as a still farther demonstration that this astonishing effect is solely to be attributed to salt, we have, says the writer, in Languedoc, on the borders of the Rhone, a spot of the same kind of stony land, in every respect similar to that of the Crau; yet, for want of the free use of salt, that of Languedoc does not maintain a tenth part of the number of Sheep that are brought up in the Crau, though, in other respects, it is no wise inferiour, the wines, and other fruits produced on the borders of both, being equal in their goodness and other essential qualities.

Having proved his first proposition incontrovertibly, he proceeds, in proof of the second, to recommend an easy experiment, which is in

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every farmer's power to make ; and that is, to give to one half of his cattle salt, and to the other half none. By this simple trial, he says, in less than a month the difference will be discernible.—The cattle to whom the salt is given will shew it in their looks, in the sleekness of their coats, in their growth, and in their strength and fitness for labour. He adds, that, with little more than half their usual food, all these effects will be produced.

To establish his third proposition, he appeals to the practice about Arles, where the cattle have as much salt as they will eat ; and none are so healthy, nor thrive so fast, as those who eat most of it.

From the above observations, so judiciously handled, there cannot remain a doubt concerning the good effects of salt in the feeding and fattening of cattle ; but it is much to be regretted (says a quoter of these memoirs), that the writer is totally silent with respect to the method of giving salt to the labouring cattle. He has, indeed, informed his readers, that, in eight days, his flock of three hundred Sheep ate fifteen pounds of salt, being one pound to every score ; and it should seem, by his manner of expressing himself, that he gave them the whole quantity
in

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in one day, as he cautions the farmer against suffering his Sheep to drink on the day the salt is administered; apprising him, at the same time, how much it sharpens their appetite: and, farther, that he had seen them not only browse upon stubs after eating the salt, but even gnaw pieces of wood of a surprising thickness.

Having thus endeavoured to enforce the necessity of increasing the number, and improving the breed of Sheep, and treated of the proper management of wool, and, in short, of every thing that concerns the welfare of this useful animal, I shall next take a slight view of the Linen Manufacture, and attempt to prove that it is not an object of national pursuit.—After this, I shall lay down a comparative view of the advantages and disadvantages that attend the prosecution of both the Woolen and Linen Manufactures, and clearly demonstrate, that the Linen is not the staple of Scotland; and that, if ever she is to emerge from her present poverty and obscurity to future opulence and glory, it will be in proportion to that degree of attention that is given to the Woolen branch, in conjunction with that of the Fisheries.

C H A P. II.

S E C T. I.

Of the Linen Manufacture.

WHATEVER material is the natural production of any country, it may be reasonably concluded, that the cultivation, and manufacturing of it into such commodities as the inhabitants cannot do without, and may export the overplus to foreign nations to advantage, is preferable to any other material not possessed of these adventitious circumstances.

It is for this reason I have been firmly convinced, ever since I was capable of forming any rational ideas of trade, that my countrymen have all along been pursuing a phantom in the Linen Manufacture, while they have totally disregarded, or very much overlooked, that real and substantial source of trade derivable from that of the *Woolen*; and which ought to be pursued

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sued with unremitting ardour, as an object worthy of our most serious attention.

I am truly sensible of the danger of combating an inveterate custom; and how much it lays me open to censure and criticism: yet, hazardous as it may be, if that custom, from the experience of ages, can be proved prejudicial to the interests of the community in general, I have too high an opinion of the good sense and understanding of my countrymen to imagine, that the efforts of an individual to particularize the attendant evils, and point out the advantages that might be derived by adopting a different conduct, will either subject me to open reproach, or endanger me to private animadversion.

Flattered with these hopes, and conscious of the great superiority the Woolen Manufacture has over the Linen, I shall endeavour, in this chapter, to lay before my reader the many great advantages attending the former, and the almost insurmountable difficulties that accompany the latter.

To begin then with flax, as being the principal article in this branch: If the manufacturer wishes to have such as is fit for his purpose, he must commission it from some port in the Baltic,

or from Holland: Pearl and-pot ashes, equally necessary, must also be got from abroad. Now, for the satisfaction of those who may be unacquainted with mercantile affairs, and in support of my proposition, it is necessary I should lay before you a state of the charges attending the importation of a cargo of these articles; to wit,

I. *Flax.**Per Cent.*

For a cargo of flax, shipped at St Peterburgh, Riga, or any other port in the Baltic, commission	2 per cent.	
—port charges, shipping charges and Sound dues,	2½ per cent.	4½
Insurance, at a medium, through the season, 3½ per cent.—freight to Leith	1½ per cent.	5
Loss by dry damage, at a medium, including short, useless flax, packed so that it cannot be discovered,	-	5
Sea-damage, which the under-writers are not liable to pay, (for they do not pay under 5),	-	3½
Shore dues at Leith, portorage, custom-house charges, ½ per cent.—ware-house rent, and weigh-house dues,	¼ per cent.	¾

In all

18½

II. *Pearl and Pot Ashes.*

	<i>Per Cent.</i>
For a cargo of pearl and pot ashes, commission 2 <i>per cent.</i> —port charges, shipping, and Sound dues, 2 $\frac{1}{2}$ <i>per cent.</i>	4 $\frac{1}{2}$
Insurance, at an average, 3 $\frac{1}{2}$ <i>per cent.</i> —freight to Leith, 2 <i>per cent.</i>	5 $\frac{1}{2}$
Loss by sea-damage, which the under- writers do not pay,	4
Duties,	25
Porterage, cartage, shore-dues, cooper- age, custom-house fees, weigh- house, &c.	1 $\frac{1}{2}$
In all	40 $\frac{1}{2}$

The same charges attend weed and wood ashes, only they are less liable to damage at sea; nor are the duties near so high as on pot and pearl ashes: but it equally affects the value, as they are much cheaper in price. The flax imported from Holland, though not loaded with such heavy charges and freight as that from the Baltic, amounts to between six and seven *per cent.* as appears from the following calculation. But it should likewise be remembered that
a very

a very inconsiderable part of what is used in Scotland is imported from Holland.

The Charges on Flax from Holland are,

	<i>Per Cent.</i>
Commission 2 per cent.—shipping charges and port charges, $1\frac{1}{2}$ per cent.	$3\frac{1}{2}$
Insurance through the season, $1\frac{1}{4}$ per cent.—freight to Leith $\frac{1}{2}$ per cent.	$1\frac{3}{4}$
Loss that the underwriters do not pay, 1 per cent.—portage, cartage, shore dues, $\frac{1}{4}$ per cent.—custom-house fees, and petty charges, $\frac{1}{8}$ per cent.	$1\frac{3}{8}$
In all	6 $\frac{3}{8}$

From the above accounts, which no one can say are exaggerated in the smallest degree, it is plain, that for every material imported for the use of the Linen Manufacture, flax only excepted, no less a duty than * 25l. per cent. upon

* Let it be particularly remembered, that in the foregoing accounts of cost and charges on flax, pearl and pot ashes, the freight and insurance are stated at the rates in profound peace: In time of war, as at present, 15 per cent. more may be added to these articles without the least exaggeration.

on its real value is paid by the importer ; and, though it may be said no tax is laid on the flax itself, consequently sufficient encouragement is offered to the Linen Manufacturers for prosecuting this deluding branch ; yet I should be glad to know if they are of opinion that their correspondents, from whom they purchase this article, furnish them with such as they manufacture themselves ? I am positive they do not : The flax made use of in Silesia is of a far superiour quality to any I ever saw imported into Scotland ; and I am fully persuaded, that it is good sound policy, nay even the duty of every nation, to with-hold from foreigners any article, the exportation of which may affect their interest ; and that, conformable to the great fundamental law of nature and nations, no country whatever ought, nor will they attempt, to export a commodity to foreigners, who are using their utmost endeavours to supplant them in that very branch of trade, of which that particular commodity is a primary source.

Such being really the case, it will be answered, we can cultivate flax ourselves ; and for which end the Board of Trustees offer us every encouragement.—I am sorry to say this last part of the proposition is too true. The Trustees have given their countenance and support to-
wards

wards propagating and naturalizing this foreign plant, to a height, which I hope more mature consideration will incline them to lower. This may be a mean of preventing many of our farmers from occupying their best corn-land on a crop of flax, that, at best, is exceedingly precarious, and to which they are often prompted by the premiums holden forth to them, as a reward for their enterprising spirit.

With regard to the other part of the proposition, The possibility of cultivating flax ourselves, that is, to any good purpose, I will venture to say is an attempt that carries with it very little probability of success. Ireland, indeed, has both soil and climate pretty favourable to the growth of flax; nay, much more so than any other island I know of; experience proving that it can be raised there with tolerable advantage: But Scotland is by no means calculated for it. The reason is plain;—in most, if not in all islands, the weather is very changeable. The snow that falls in Scotland never lies long enough to keep the frost out of the ground, and the heat of the spring not being sufficient to warm the land, so as to render it fit for the reception of the seed, vegetation, of consequence, is retarded, nay often intirely stopped. To support this assertion, I beg leave to inform my
readers,

readers, that being three years ago on a journey to the north, in order to visit a gentleman whose assiduity in promoting the manufactures of his country is well known, and whose memory will be revered by after-ages; I saw, in perhaps the finest country in Scotland for the purpose, several rich fields which had been ploughed down and sown with flax-seed, with great labour and expence; but which, unfortunately for the deluded farmer, yielded no crop whatever. If the preceding spring had been intolerably cold, which, by the bye, many may remember to have been a warm, and promising one; and if the land had not been in good condition, and proper for its culture, these circumstances might have been pleaded as reasons for the failure; whereas, the contrary being the case, the event proves, beyond the shadow of a doubt, that let our efforts be exerted to the utmost, we can never conquer impossibilities; and that, on account of the unfriendliness of our soil, and the inhospitality of our climate, this valuable seed can never be reared here to a state of mediocrity, much less to that of perfection.

In the course of the above journey, my attention was taken up in viewing the flax I saw growing between Perth and Aberdeen; and I candidly declare, that I would not have accepted

ted of the whole as a present, to be obliged to dress and manufacture it. The thing called flax, of the growth of this country, does not deserve the name; nor will it be considered as such by any who has seen it grow in its natural clime. It is in the eastern countries of Europe where the best flax is produced: there the frost never pierced the ground since the creation, nor ever will; for, about the middle of October, the snow falls, perhaps, from two to three feet thick, and often more. Immediately after, the frost sets in, and freezes the snow so firm, that carriages go over it, the whole winter, without so much as breaking the crust. Towards the middle of March, the heat of the sun dissolves the snow, and vegetation immediately commences, and that in a more rapid manner than can possibly be conceived by those who have never seen the phenomenon. The ground (richly manured by the snow), being rendered like a hot-bed, forces vegetation so fast, that flax-seed and barley are ready for reaping eight weeks after they are sown. And although rain seldom falls all the time the flax is growing, yet it should be observed, that the ground stands in no need of much moisture, as the plant covers it in a short time, and screens the earth from the scorching beams of the sun; nay, it sometimes happens that, in these climates, not a cloud

cloud is to be seen for many weeks together ; nothing but constant sun-shine, and pleasant summer weather.

The above are natural advantages, concurring to render the growth of flax well worthy of the attention of the inhabitants ; nor will it be in the power of any nation to rival them in its culture, so long as day and night, summer and winter, shall continue their natural succession, invariably observed since the creation of the universe.—But it is in vain to expect the same advantages from lands situated in the middle of the ocean, possessed of soil and climate diametrically opposite to the genius of the seed ; and, therefore, I would fain flatter myself with the hope that the Board of Trustees, seeing the uncertainty that attends the raising of flax, will lessen the sums, and curtail the number of their premiums, and transfer the same towards encouraging the culture of Wool, and bringing the various branches of the Woolen Manufacture to greater degrees of perfection. This mode of conduct would prove very beneficial to the country ; whereas, the other often lands us in great losses, exclusive of the encouragement given by the Board, and, in its more than ordinary success, can never be attended with national advantage.

As a farther corroborating proof that flax is an exotic, and the propagation of it a fruitless, unprofitable pursuit, let it be remembered, that lint-seed totally degenerates in two or three years. That which is raised this year cannot be sown with any hopes of its producing a tolerable crop for the next; and if it be continued three years, (though you were to change the soil to any place within Scotland), it will scarcely come up above the ground. No one will doubt the truth of this assertion, when he reflects on the number and frequency of processes that come before the Court of Session, between the Dutch merchants and those of our own country, for the price of flax-seed furnished by the former to the latter, whose defences for non-payment are substantially as follow: "That having sold the cargo to different farmers in the country, allowed them the usual time of credit; that, after their labouring the ground, and sowing it with this seed, no crop whatever ensued; and, as the farmers absolutely refused to pay them the stipulated price, it would be extremely hard were they to be found liable to the Dutch merchant for a cargo, from the sale of which they never drew a single shilling."— I will not take upon me to say how far this defence would be valid against the Dutch merchant; but the circumstance of the flax never
appearing

appearing above the ground, undoubtedly afforded the farmer a good reason for withholding payment from the Scots merchant, as he was not only deprived of the expected crop, but also lost his labour, and the produce of the ground for that year.

When such are the uncertainties that attend the raising of flax in this country,—when daily experience evinces that it is a hazardous trade, we ought not to hesitate a moment to resolve to give up the practice, or at least to confine it within certain bounds. The most skilful cannot tell, by looking at the seed, whether it be good, or possessed of vegetative principles; for, while it carries the appearance of having quickening powers, it may be dead and corrupt, without the influence of vegetation.—This was expressly the case in one of the processes above alluded to. A proof was taken as to the quality of the seed when shipped from Holland; and some, skilful in these matters, gave evidence that it had every appearance of good seed at that time. It was also proved to have received no damage at sea; and several persons, deemed competent judges, passed many encomiums on it, after it came into the Scots merchant's possession: yet this seed, sold to different farmers in the county of Moray, and by them sown and managed with due care

attention, never appeared above the surface, although this district is known to contain as good and as rich land as any in Scotland.

I have been the more particular on this subject, as I sincerely wish to convince the country gentlemen and farmers of the folly of occupying their valuable grounds with an article so extremely hazardous and uncertain. Nature never intended the Linen Manufacture as the staple for Scotland: for lint, its primary article, notwithstanding the uncommon attention paid to it, the laws enacted in its favour, and the premiums granted for its culture, the most favourable season never produced any equal to foreign growth; neither has the most luxuriant crop indemnified, much less rewarded, the industrious labourer. Our being obliged to be annually supplied with seed by our neighbours the Dutch, or from the Baltic, clearly demonstrates that it is not congenial to the soil, and, consequently, can never be raised to perfection. It is on this account that foreigners can supply this country with both flax and linen cheaper, and of a better quality than we can rear and manufacture it ourselves, especially linen of the finer kind.

I would not, however, have it understood as if I meant to persuade those who are already engaged

engaged in the linen manufacture to give it up altogether, or to deter others from ever embarking in it: I would have the *former* to circumscribe it by degrees, the *latter* to enter into it cautiously, and both to prosecute the woollen vigorously. Linens, for our own consumption, ought certainly to be made at home, and even some for our neighbours, the English; but these should be of a coarse quality, and manufactured with foreign flax. The Scots manufacturer cannot earn a subsistence by working fine linen, and selling it in the English market; neither ought we to flatter ourselves of being capable to make Linen that will bring a proper profit by exporting it abroad, our own plantations not excepted.

This would be an absurd idea, while Germany, and the eastern countries, continue to rival us in that branch; for it is an undeniable fact, they are, and probably ever will be, able to undersell us in price and quality, at least 30 *per cent.* Who then can imagine that the Americans, or West Indians, will purchase this article from us, when they can be supplied with German Linens at the Dutch and Danish free-ports in the West-Indies upon much better terms? Where the temptation is so great, the

event must happen, in spite of every endeavour to restrict them.

Experience might have convinced us, long before this time, that the Linen Manufacture is rather a losing than a lucrative branch, especially the finer sorts of it, which we have been long accustomed to send to the London and foreign markets. Nay, I dare venture to affirm, that the manufacturers of fine Linen have, upon an average, lost four-pence *per* yard for every yard thus exported; so that, as many yards as have been sent abroad, so many four-pences have been lost by this *Staple Commodity*, besides the value of the materials paid to foreigners. Surely such a trade, if it was meant to give employment to the poor, was the very worst that could be devised: For, while the masters were such great losers by the business, the journeymen were sure to suffer proportionally; and, instead of receiving wages to enable them to live comfortably, the most rigorous parsimony was necessary to preserve them from absolute starving.

The British Linen Company embarked in this branch, and that too with the best appearance of success; for they received much greater support than ever was given to any infant manufacture

manufacture undertaken in this country. Their directors were judicious and intelligent; their servants were honest and (some of them) alert; witness Mr W. T—d; yet with all these advantageous circumstances, it has failed of success. I myself have furnished the Company, for several seasons, with ships to bring home their flax. —My opinion being often asked by some gentlemen, deeply concerned in the trade, I was always uniform and explicit, that it could not support itself. It has impoverished this nation to the last degree, by draining it of cash. The money that has been remitted (all in specie) in my time, to pay for flax and flax-feed, as well as for pot, pearl, weed and wood ashes, &c. to Holland and Russia, is so immense, that it almost exceeds the bounds of credibility. I know, to a trifle, the very sum that has been remitted to Amsterdam, Rotterdam, and Hamburgh, for the above articles for twenty years past; but it is so very enormous, that I had rather wave mentioning it, lest its veracity should be called in question: suffice it to say, that it might well stagger the belief of the most credulous.

Certain it is, that this trade has carried more money out of Scotland, in my time, than all our foreign trade put together; for the French and Spaniards take our goods in exchange for their commodities;

commodities; but those who supply us with flax, flax-seed, &c. take nothing but ready money. It is to this cause, therefore, that I attribute the great scarcity of cash, and of the London and Dutch exchange having been so much against us. And my reason for thinking so is, that there having been less of these articles imported hither within these five years past, the exchange has become more moderate, drawing nearer to a par in proportion as the importation of these articles decreases.

My knowledge of what put the political spinning-wheels in motion is not of yesterday. Archibald Earl of Islay, afterwards Duke of Argyle, who long held the reins of the political system of this country, gave birth to this Utopian scheme, in which he was assisted by *able* men, most firmly attached to his inclinations. Far be it from me to derogate from the merit, or decry the memory of that Nobleman. He was undoubtedly a great man, and an ornament to this country; but the doctrine then was, *Keep the people poor, and they will be dependent*; nor could a more proper device be thought of than employing them in the Linen branch. This I have frequently taken the liberty of mentioning to some of the leading men of those days, with whom I had the honour of being intimately acquainted;

quainted; but words or writing, at that period, availed nothing. The answer to every thing offered on so unpopular a subject was, We must not disoblige the English: the Woolen is their great staple, with which we must by no means interfere, otherwise we shall excite their indignation, and our bounties and premiums will be recalled.

Such was the patriotic creed held forth at that time, which, however, required the aid of other delusions to create digestion. For this purpose, the counties and burghs were supplied with a-bundance of the British Linen Company's notes, which they were taught to believe was equivalent to cash. Large quantities of flax, flax-seed, reels, wheels, flax-mills, and *wind-mills*, were likewise poured in among them, in order to promote and carry on a trade that never did, nor never can support itself, if credit can be given to forty years experience. Bleachfields were formed, and premiums given to those who could raise the most flax, &c. Provost such an one, with the assistance of the Dean of Guild, Conveener, and Deacon of crafts, were appointed to have the direction of the district adjoining to their respective burghs. Feasts were given to these gentry, and flax, &c. put into their hands. Bounties, premiums, and what not, were found-

ed

ed in their ears. Bleachfields were encouraged, though the use of lime and pigeons' dung was forbidden. Something in their stead was necessary to be substituted, which might *force* the Linen to a sudden whiteness, and yet be less expensive than soap or any thing lixivial. Spirit of vitriol, or some such pernicious drug, was instituted to enable them to bleach cheap. One devil was introduced to drive out another; but softened with the name of *oil* of vitriol, large quantities of which are injudiciously used by many Bleachers, whereby the oil is extracted out of the yarn, and the cloth burnt. This it is that has had great effect in ruining the character of Linens made in this country; and many industrious housewives, who make for their own families, feel most severely the bad effects of this new-invented method of whitening cloth. Chymists indeed say, that it may be applied in small quantities by skilful persons; so may poison, or aqua fortis, to the human body; the operation in both is slow but sure. If cloth be bleached with soap and ashes, it will last double the time of that which is forced white by a spirit that will corrode iron.

These, and many other circumstances which might be enumerated, are the disadvantages that attend a too extensive prosecution of the
Linen

Linen trade ; or, in other words, making it the established manufacture of this country. The fine white Linen, with which we have hitherto attempted to furnish the London and foreign markets, ought to be totally neglected, for reasons heretofore mentioned ; while every encouragement should be given to the coarser kind, the thin, low priced Linen, fabricated in the counties of Fife, Perth, Angus, &c. ; also to that species of it carried on at Paisley and its environs ; and particularly to the Linen yarn manufactured in the counties of Aberdeen, Banff, &c. as it meets with a ready sale at Nottingham, and other manufacturing towns in England, and has brought a great deal of ready cash into the country. The above are articles in the Linen Manufacture to which our attention should be principally directed, and not to the fine *white Linen* ; especially as we are deprived of the means of making it equal to that manufactured in other countries, who enjoy every natural advantage.

The Paisley branch requires but little flax to carry it on ; and the other kinds of Linen, recommended as only worthy of the attention of my countrymen, being most profitable to the manufacturer, may be fabricated with our own flax. This being the case, and seeing the above
articles

articles are purchased with avidity, both at home and abroad, it may not be altogether improper, as many people are in the practice of raising flax, to present the public with an account of the soil best adapted to its propagation, together with what other remarks may be useful as to its culture and management.

It appears then, from experience, that lint should be sown upon a deep earthy soil, or upon any soil that is tolerably good lying level, and not being too moist. The ground, previous to its being sown, should be *well reduced*, by frequent ploughings and harrowings, giving it at least three single harrowings *before* and *after* sowing.—Soils inclining to moss or wet clay,—that are *sour* or overspread with rushes, are unfavourable to the growth of lint.—Under the former circumstances, and from the best accounts, it appears then, that an acre of land requires to be sown with about eight pecks of lintseed; having the ground first well cleared of annual and perennial weeds and quicks; and taking care, when half-grown, to let it be well wed, but always when dry.—It ought never to be pulled till the stalks begin to grow yellow, and the leaves to fall;—till the seed, appearing to be well nourished, has attained a proper size and colour. The *beets*, when pulling, should be
from

from eighteen to twenty-four inches circumference ;—stooked up till dry, then stacked in the barn-yard like corn.—Proper care must be taken, when plucking it, to separate the different qualities of the lint from each other ; that is, the large and coarse stalks should be plucked first ; the stalks of a middling size and quality next ; and the smallest or finest stalks the last. In the spring it should be thrashed in a barn, and afterwards water-milled, when it may be sold in stones or quantities.

A judicious farmer, discussing the above subject, says, “ I have seen lint-seed sown on old *ley* that had been limed after the first crop, and on new ground that had been taken in with lime after the third crop ; but in both these cases, with very inconsiderable advantage.—If the soil be light, it may be sown after the turnip ;—if rich, after the barley crop ;—if poor, or overrun with weeds, after a summer fallow.—These, he adds, are the most eligible cases for adopting a crop of lint.” The most advantageous produce, however, that can be expected in this climate is, from fifteen to twenty-five stone, English weight, and one and a half, or two hogsheads of seed *per acre* ; the first of which, at an average, may be worth about eight shillings per stone, and the seed three guineas per hoghead,

reckoning ten stone of lint to a hoghead. It were almost needless, however, to observe, that for one crop that produces as above, twenty do not pay the expences incurred in preparing the ground, rearing and dressing it; the weeding, pulling, and other manufacturing, amounting to about three pounds *per acre*, exclusive of the ploughing.

I have dwelt thus long on the article of the Linen Manufacture, as several persons, for reasons I cannot conceive, have imagined, adverse to my wishes, that I recommended it should be given up altogether. As a proof of the contrary, I need only mention, that some years ago, I prevailed on one of the greatest men of the country, Mr Oswald of Dunnikier, to apply to administration (though without success) for having the duties taken off hemp, and all the materials imported for the Linen branch. My great objection to it, therefore, was (and still is), that we were pushing it too far, while the Woollen Manufacture, the materials of which are almost all duty free, was, in a manner, totally neglected.

C H A P. II.

S E C T. II.

Of the Superiour Advantages the Woolen Manufacture has over the Linen.

THE wealth and strength of a nation is proportioned to its natural advantages, to the number, skill, and industry of its inhabitants, and to the extent and profits of its trade.—Now, if population be one of the great sources of a nation's wealth, it becomes an object of inquiry, what circumstances are most conducive, and which of the branches in question is best calculated to promote this end. The former, by inquiry, will be found to originate from such institutions as secure property, prevent oppression, encourage the settlement of families, and facilitate the rearing of children.—And with respect to the latter, That the Woolen Manufacture is better adapted to encourage population, and pro-

mote industry, than the *Linen*, and has, besides, the pre-eminence in many other respects, will appear from the following comparison drawn between both with the utmost candour and impartiality.

It has been proved, by fatal experience to this country, that the Linen Manufacture cannot support itself by nature. It is an exotic that is not able to stand without support, nor walk without crutches. All attempts to support it by art are vain and unprofitable: Whereas, the gain or profit arising from the Woolen Manufacture, which enjoys the natural advantages of good climate, fertile soil, and useful materials, is certain and durable, if not crushed in the bud by those very persons whose interest is concerned in holding it up.

The Linen Manufacture is exceedingly precarious, inasmuch as three fourths of its original materials, upon an average, are of foreign growth; while almost every article for that of the Woolen is to be found at home.: The materials for the former are burdened, on importation, with enormous customs; while the original ones for the latter, from the fine *cochineal* to the lowest priced *madder*, are imported duty free.

The

The individual and national advantage the Woolen Manufacture has over the Linen, will be rendered conspicuous from the following point of view. A weaver of Linen cloth cannot earn half the wages that a Woolen weaver can; none therefore would chuse to be the *former*, if they had an opportunity of becoming the *latter*; and consequently, if proper attention were paid to the Woolen Manufacture, when the fabricators of Linen shall with difficulty find workmen to weave their cloth, those of Woolen will be amply supplied, as the profits of both master and servant are reciprocally greater in the Woolen than those in the Linen branch. The industrious, in the various kinds of the Woolen branch, can live comfortably, and clothe themselves decently; those in the Linen never did, nor never can. Plenty and happiness appear on the countenance of the one, poverty and misery on that of the other. But what entitles the Woolen Manufacture to peculiar favour in this country, where stocks are small and credit low, is, that Woolen goods can, from the time of clipping or shearing the Wool, be brought into market in six or eight weeks, some branches of it in three; whereas, the soonest one can bring in Linen, from the date of reaping the flax, is fifteen or eighteen months. The latter consumes much money on a commodity often as unfaleable as it is unprofit-

able; the former requires a less proportional capital, its wares marketable and advantageous, and converted into cash five or six times in a year.

The unparalleled superiority the Woolen Manufacture has over the Linen, and the great advantage it may be of to this nation, is evident, inasmuch as it affords employment and bread to the young and old of both sexes. Now it is natural to suppose, that the industrious labourer will always flee to that business by which he can acquire most money; which enables him to live more comfortably, and provide against old age, sickness, or disease, for the same reasons as a merchant, finding an extraordinary profit arising from a certain article of his trade, will exert his utmost to extend the consumpt of that particular commodity. If such wages, and suitable encouragement, be given to skilful workmen, as empower them, by frugality, to lay up against the adventitious accidents of life, they will be more inclined to answer the purposes of creation, which are, to *increase* and *multiply*. The Woolen Manufacture is peculiarly favourable in promoting matrimony, and consequently population; as, besides the advantages before-mentioned, children, from five years of age may begin to be useful, and are even employed in the
different

different branches of it, being singularly adapted to their infant state. It is the fear of want that deters most of our labouring people from marrying. Indeed, no man in his senses would attempt to marry, and be threatened with the clamours of children crying for bread, when the wages he earns are barely sufficient to maintain himself.—Under this predicament stand the poor Linen Manufacturers; whose case, independent of compassion, or the real welfare of one's country, merits the particular attention of the landed men, for the sake of securing their own rents.

Before I conclude this section, it may be necessary to observe, that the Woolen Manufacture does not, like many other professions, require a great exertion of strength. The young and old can be employed in such parts of it as are best adapted to their years, leaving the hard labour to the more robust, and each in their respective offices absolutely useful. Now, as a nation's wealth is not to be computed from the temporary and partial state of its coffers, repositories of corn, or fullness of ware-houses; but from the fruitfulness of its land, and from the numbers, frugality, industry, and skill of its inhabitants; so in this point of view, the Woolen
Manufacture,

Manufacture, which is profitable to all concerned in it, which incites and gives encouragement to industry, and which rewards the skilful,—tends to multiply abundantly the people, who, in proportion to their industry and virtue, are sources of the wealth and strength of a nation.

CHAP.

C H A P. III.

S E C T. I.

Of the Woolen Manufacture.

BEFORE we enter upon this subject, it may not be amiss to draw a comparative view of the effects of idleness and industry.

Idleness is the bane of society, the spring of vice and irregularities, and the harbinger of public calamities. It makes us always dependent on our neighbours for commodities we cannot want, and for which we are unable to pay. Its offspring is public poverty ; and the greater our opportunity of supplying ourselves, and the more ample our rights and liberties are, the more galling is the reflection, that by neglecting to profit by the means that would keep us independent, we have entailed poverty and thralldom on ourselves and posterity.

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It is not long since Scotland felt the full weight of these calamitous circumstances. We have long aped our neighbours' follies, and neglected to imitate their virtues; and, being ignorant or careless of our own resources, we foolishly confided in the aid of others, and contentedly jogged on in dependence and obscurity; nay, so far from wishing for an internal supply, we slighted the opportunities afforded us by nature, and furnished ourselves with articles of foreign fabric, at the expence of our indolence and inactivity.

Industry produces opposite effects, and should therefore be promoted by all possible methods; by wise regulations of commerce, as well internal as foreign; by the vigilance of magistrates to suppress sloth, vice, and immorality; by a due attention to the indigent and feeble, that none perish for want, when there is a sufficiency for all; and by incitements to the love of virtue, and the practice of religion. These, among many other necessary regulations, are principally to be attended to, to excite a general spirit of industry, which, when directed to proper objects, is the source of opulence; as idleness, or labour misapplied, is the ruin of a country. When the first prevails, the inhabitants live decently and comfortably; but when
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the last is predominant, they are poor and miserable.

Of all the labours which can be devised to exercise the hand of the skilful artist, or to give constant exercise to the willing labourer, none can be more useful or beneficial than the *Woolen Manufacture*; which, if properly extended, and rightly managed, will afford such an ocean of wealth, such advantages in trade, and such employment for the poor, as can never be derived from any other branch whatever, except that of the *Fishing*: Nor could kind nature have shewn herself in any thing more favourable or generous to Scotland, than by enriching it with an inexhaustible fund of means and materials for the accomplishment of *both*.

The Divine Providence has manifested itself in bestowing upon different countries different productions, marking their mutual dependence upon each other for the various products of the earth. This Island, however, on a comparative view, may justly be said to have the pre-eminence over many others in this respect, as there are few of the real necessities of life which kind nature has not granted us more immediately within ourselves.—But, in no one instance is she more conspicuous than in the quantity and
quality

quality of Sheep pasture, and the other various requisitions peculiarly adapted for prosecuting the different branches of the Woollen Manufacture.

It were needless to recapitulate all the advantages which Scotland has over England in this respect; suffice it to mention some of the principal. The *Wool*, which we can increase to almost any quantity we please; or, if it were not possible to improve our Sheep, or acquire a breed that would produce wool fine enough for some particular purposes, we can commission and receive such from Spain, upon as easy terms as our neighbours. It should, however, be remembered, that our Sheep bear more Wool than any Sheep in Europe, or any other country; many of them produce as fine Wool, and their number is daily increasing. The Sheep of Spain bear but two kinds of Wool, very *fine*, and very *coarse*; and but a small quantity of each.—One of our Sheep's fleeces will, at a medium, weigh three of theirs; and while ours are fit for cloth from one shilling and sixpence to thirteen shillings *per* yard, the fine Spanish Wool is only fit to make cloth at sixteen shillings, and the coarse hardly at one shilling *per* yard.

Firing,

Firing, too, an article of no inconsiderable moment (especially in some branches of the Woolen Manufacture), and with which this country is amply supplied, can be had upon better terms than in England : Besides, the infinite number of *rills* of water we have, so necessary for prosecuting this trade, give us an advantage over every other country : But above all, the value of *labour* in Scotland, being much lower than in our sister kingdom, proves that it is better calculated for the feat of manufactures in general, and more particularly for those with which nature has furnished the industrious with materials.

Land-Carriage is the last article I shall mention, in which Scotland has a considerable advantage over England : For, no one will attempt to deny, that very large quantities of Wool are sent yearly from certain counties in Scotland, one hundred and fifty miles by land-carriage into England, to be sorted and combed there. When combed, it is returned hither to be spun ; next sent back again to England, by the same mode of conveyance, to be woven into cloth ; and, lastly, returned hither a third time for sale, to that very country where the Wool grew ! Now, if it was nothing but the saving of the land-carriage backwards and for-

wards six hundred miles, independent of every other consideration, cloth spun and woven in Scotland may be sold considerably cheaper than that fabricated in England.

The above advantages, independent of many others hereafter to be mentioned, are sufficient of themselves to encourage us in the pursuit of, and even to insure success in, the Woolen Manufacture. Let us then, my countrymen, set about it in good earnest, and not listen to the delusive arguments of the narrow-minded, or self-interested, who would insinuate that if we interfere too much in the staple of England, her people will be offended, and refuse to take those articles from us, with which we have been accustomed to supply them. This, I am certain, will never be the case: for, however contracted our notions of trade may be, the English, who are endowed with a more liberal way of thinking, will never refuse to traffick with any country, because its inhabitants may attempt to fabricate themselves what they formerly commissioned from them; nay, even tho' they were to carry their endeavours so far as to emulate them in a particular branch. England, instead of being jealous of our interfering in her favourite *Manufacture*, and increasing our *wealth* and *numbers*, will certainly reap the benefit

benefit of *both*: For, supposing there were at this instant five hundred thousand Woolen weavers in Scotland, the customs, the excises, the naval and military strength of England would be proportionably increased.

But if we view this matter a little closer, we shall find the interest of both equally concerned; and that, let us prosecute it to what extent we please, the English trade cannot suffer in the smallest degree. On the contrary, by a friendly junction of the two kingdoms in the Woolen branch, we could not fail to drive the French, Dutch, and indeed every other nation, entirely out of the foreign markets, which would be an acquisition of the greatest importance to this commercial nation; while Ireland, by the same reason, might enjoy unrivalled the Linen Manufacture, which is properly her staple. This would be a mean of encouraging the Irish (dutiful and obedient children, who deserve to be cherished) to send all their Wool to Britain; whereas, it is well known the greatest part of it is smuggled to France or Holland, where it is manufactured into cloth, and sold at an under-rate in foreign markets, to the great prejudice of this nation.

It is an undeniable fact, that the Wool of France and Holland is of such a nature and quality, that it cannot be wrought into cloth or stuffs for ornament or service, without being mixed with ours. This is evident from the artifices made use of to purchase it at any price, under such a glaring circumstance as *prohibition*. Surely we ought individually to put a stop to this baneful traffic, unless we mean to forego that species of commerce which has accumulated such wealth and power to Britain, as gives her the empire of the sea, and has made her the terror of perfidious nations. Let us then no longer transport our unwrought Wool under pretence of commerce, which tends to ruin the nation, by depriving it of those profitable branches of trade, by which this kingdom must necessarily flourish: Let us, I say, remove the cause, and the effect will cease; let us withhold from them our Wool, and they will never be able to compete with us at foreign markets.

Having thus treated of the Woolen Manufacture in general, I shall now proceed to particularize such branches of it as may be carried on with no less emolument to the private undertaker, than to the intrinsic benefit of the whole kingdom.—And first,

Of

Of the Broad Cloth Manufacture.

AS children should be first taught to walk before they be made to run,—so infant manufactories should begin with the coarsest kinds of goods, till by attention and experience they arrive at perfection in the finest. It is a fact that ten times the value of the lowest and middling priced goods are used and vended more than the higher; and the overplus, after supplying our home demands, find a ready sale at most places in Europe. In short, our primary object should be, to make such cloth as is adapted to our own wear at home, and to the general demand abroad, before we attempt to rival our competitors in the superfines. No one will deny, that the principal materials for manufacturing Broad Cloth from two shillings and sixpence to thirteen shillings and sixpence *per* yard (to which our attention should be principally directed), is the produce of our own country; and if that spirit of improvement and emulation be still cherished among our gentlemen and farmers, I make no doubt but we shall have a breed of Sheep that will yield wool from which may be made cloth in any quantity, and to any degree of fineness, not in the least inferior to that

made entirely of Spanish wool. But, if it were possible to fail in this, we have the consolation to be in no worse situation than our neighbours, whose manners we may imitate by purchasing Wool from Spain, seeing we can do it as cheap as they, or any other nation in Europe.

I need not tell my readers, that superfine English cloths are made entirely of Spanish wool; which wool being conveyed from the port of importation to the great seats of the Woollen Manufacture, in the interior parts of the kingdom, is subject to a land carriage of one hundred or one hundred and fifty miles; from which expence the importation of Spanish wool, to the great towns on the east and west coasts of Scotland, is entirely free; so that in this respect we have a manifest advantage over the English.

As to the middle kind of Woollen cloth, commonly called *fine*, in contradistinction to *superfine*, we can manufacture it entirely with our own Wool, while the English are obliged to mix theirs with *Spanish*; and for the coarse kinds we have Wool adapted to every price, as well as to the various branches of this trade. Now it is evident that English Wool is carried, at an average, from the sheep countries to the manufacturing towns, eighty miles; whereas, Scots Wool,

Wool, carried to the great towns in Scotland, is not, at a medium, subject to a land carriage of more than fourteen miles. This saving, not to mention the low price of labour, and other concurrent circumstances, giving us a superiority over the English, who have carried this branch to a greater height than any other nation, enables us to bring our goods to market cheaper than they, and demonstrates, that the Woollen Manufacture is an object well worth the attention of my countrymen.

I have already remarked, that the French cannot manufacture broad cloths without a mixture of British or Irish Wool; yet they undersell the English in this article, although it is well known, the very Wool of which they are partly made, is smuggled at a higher price than the natives pay for it. Whence arises this? The answer is plain; from the low price of labour, cheapness of provisions, and the industry of individuals. If these are the real causes of the French underselling the English, may not similar causes produce similar effects? or, in other words, may not the Scots undersell the French, seeing we have Wool at our own door, and labour and provisions equally as cheap?

It is very certain, that, before the union, we
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not only clothed ourselves from our own manufactures, but exported many of our Woollen goods abroad. How then comes it to pass, it may be asked, that we have fallen off from, and so much neglected, our own interest since the above period?—I shall endeavour to give this question an answer.

I have already shewn you by what powerful means the Linen Manufacture was introduced hither, and recommended for a *staple*. Novelty, and the hopes of gain, soon gave it footing; and in proportion as the Linen branch was encouraged, the Woollen declined. Our new intercourse and alliance with the English induced us to ape their follies; and while they impolitically preferred foreign commodities to their own, fashion and example diffused their influence over Scotsmen, and, by a vitiated taste, caused them to prefer English cloth, or any thing else of English fabric, to home manufactures. Thus the staple of Scotland grew into disrepute. The nobility, who always give the *ton* in dress, neglected Woollen goods fabricated here, wearing mostly English cloth. The landed gentlemen followed the example of the nobility, the merchants and tradesmen that of the landed gentlemen, till the infection was caught by all ranks of people, diffusing its malign influence from the
highest

highest nobleman to the lowest mechanic.—It is but within these few years that we have been sensible of our error. A few public-spirited noblemen, whose memories will be revered to the latest posterity by every true friend to Scotland, drew back the curtain, threw off the veil, and shewed us our interest in the most conspicuous point of view.

Awaked thus from a deep lethargy and tardy supineness, to a state of action, and to a sense of that duty we owe ourselves, by those persons whom we have every reason to believe have the good of their country only at heart, we are now happily emerging from poverty and thralldom into opulence and security, by turning our views to the establishment of trade and manufactures, which cannot fail in the end to produce the most salutary effects: and the well-wishers of Scotland cannot but reflect with the greatest pleasure, that these manufactures are not in their infancy; we see them already in a progressive flourishing state; and I shall exert the utmost of my abilities to point out the surest method of bringing them to perfection.

No one will deny that the inhabitants, in many parts of Scotland, are very industrious; but whether their industry have been, or be now directed

rected to proper objects, is a matter that deserves to be inquired into. In proportion as this prevails, the more opulent, flourishing and happy will that nation be; the effects of it is diffused not only through the neighbourhood, but the country in general, while each person insures to himself domestic happiness: but when this is not the case, which must ever attend the prosecution of the Linen * branch, be they ever so industrious, they are a kind of burden to society, less serviceable than they might be, and always dependent, inasmuch as their labour can never procure them necessary food and raiment.

It is exceedingly reproachful to Scotland, to have been so long dependent on England for such commodities as they could have procured at home on much easier terms than the English themselves; and that the little money we have in the country should be drained to support the English manufacturer, when our own fields and flocks have been neglected; and people, willing to be industrious, half starving for want of employment.—But by an exertion of modern patriotism, in which there is as much virtue as
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* *Except under the restrictions before-mentioned. See Chap. II. Pages 101. and 107.*

in ancient heroism, having for its object those blessings, without which liberty is but a name,—the scene is happily changed. We have improved our taste within these few years, by giving less countenance to goods of foreign fabric,—by attending to the culture of our fields, and improvement of our flocks. We have driven tattered poverty from our streets, by giving proper employment to our poor; and experience convinces us, that our country, our families, our friends, and every thing that is dear to us, depend on our industry being bestowed upon those objects by which we can be most benefited; and that these objects are, the Fisheries, and the Woolen Manufacture in all its branches.

Scotland, abounding with numerous small towns and villages, is exceedingly well calculated for the seat of manufactures; but in no part more so than the county of East Lothian. It has been rightly observed, that manufactories seldom prosper so well in large cities and royal boroughs, as in country towns and villages. In the former, the working people meet with many inducements to spend money, which they do not in the latter; and besides, these are allowed to be more healthy than large populous towns. Provisions too are always cheaper in the country than in the capital; the price being in some measure

ture proportioned to the demand. In short, it is in vain to think of bringing manufactures to perfection in any country where vivres are dear. Mechanics will as naturally resort to places in which they can live cheap, as a prudent man will purchase of that merchant who sells the same quality and quantity of goods cheaper than his neighbour.

It was certainly with a view of finding provisions cheap, that induced so many of the manufacturers to settle in the inland counties of York, Warwick, Nottingham, &c. in the former of which living is more moderate than in any other; and yet these places, in other respects, are but ill adapted for trade, being subject to such enormous land carriage; whereas, were these situated in places where the necessaries of life fetched exorbitant prices, the labouring people would find it very difficult to furnish themselves and families with what is barely requisite to support existence.

Manufactories, in their infant state, labour under many disadvantages; but prudence, attention, and perseverance must at last accomplish.—It cannot, however, be said, that the want of money in the nation is any obstacle to the progress of the Woolen Manufacture; or
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that those who have it will not risk it on this business.—For I beg leave to remind my readers, that thirty years ago, when money was much scarcer than at present, *one hundred thousand pounds sterling* were subscribed for, and *seventy thousand pounds* actually paid in, towards carrying on that of the *Linen*, under the firm of the British Linen Company. Now, I have already proved, that the Woolen Manufacture has every chance of succeeding; and it is equally evident that money is not less plentiful *now* than it was *then*, as appears from the readiness with which one hundred and twenty thousand pounds sterling were subscribed a few years ago towards completing the great canal. Seeing then that we are in no want of money, let us employ it in such branches as will be most advantageous to the nation.

With regard to workmen, the goods daily manufactured are the best proof that we have some who are masters of their business; time will increase their number, and experience improve their skill; so that we need not fear having workmen who will bring every branch of this valuable manufacture to its dernier perfection. I have formerly observed, that our people, in general, have as good genius for invention, and talent for execution, and are as steady in their

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operations as those of England, or any other country: But if we were really in want of able and skilful workmen, the Board of Trustees would no doubt give their aid to the efforts of their countrymen, by inducing the most able to come from England, Ireland, France, or any other country, to settle among us for life, giving them encouragement suitable to their merit; nay, as a well known author has observed, they ought to send, if necessary, apprentices and sagacious workmen to the different seats of the Woolen Manufactures in Europe, to be perfected in the business, and to give rewards to such as invent or import machinery useful in the different branches.

With respect to the quality of our goods, there are several articles in which we already excel the English, many that are equal, and but few inferiour. Our superfine broad cloth is among the last, which not being so well dressed, is less pleasing to the eye, and, consequently, not so ready for sale; but it should be understood it is as well manufactured, is much more durable, and should, therefore, be entitled to the preference. There is one thing, however, in which I wish our people would imitate the English, whom experience has taught, that it is more profitable to sell one hundred pounds worth of cloth

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at five per *cent.* advance on the prime cost, than forty pounds worth at ten per *cent.* Let us then resemble them in this matter. Let us be content with a moderate profit in order to gain greater, and fabricate our goods well to increase the consumpt, which is the foremost encouragement that can be given to infant manufactories.

The greatest bar to success in the Woollen Manufacture some time ago was, the careless or slovenly manner in which some of the cloth was finished, either through inattention, or want of proper hands. There are many people who wish to please the eye in cloth as well as in a wife, and, for obvious reasons, that they are to wear the one, and keep the other as long as she lasts; others seek to content the pocket, and some both: But it is a natural cause, and it will not be denied, that, if two articles were placed before us, equal in price, and similar in quality, except in the dressing, there are too few, I am afraid, public-spirited enough to reject the former, and chuse the latter. We are, however, no longer under these galling circumstances; our workmen are experienced and careful; our mechanics able to keep the proper utensils in repair; and, instead of one man trudging through all the various parts of the manufacture (except spinning and weaving), each has his pe-

culiar province assigned him, as in England ; so that every constituent part is better done than formerly : A sufficient incitement to the true friends to this country to testify their patriotism, by having their clothes of Scots Woolen Manufacture, which, if adopted by every individual, it is more than probable, that five hundred thousand pounds *per annum* would be saved to Scotland. Then, instead of the many hundred inhabitants who are daily seen in our streets, without shoes and stockings, in whose looks care and a sense of dependence are expressed, who are actually starving for want of employment, they would be roused into a spirit of industry, would be fully and advantageously employed in the different manufactories, and, by diligence in their calling, with the blessing of health, would be raised to plenty, ease and happiness, and a state of independence.

As to the article of dying, a matter of no small importance to the Woolen Manufacture, particularly Broad Cloth, I am convinced it can be done as well here as in England ; nay, be it known, that many of our countrymen, now in London, are the most eminent in the profession. And here I cannot help mentioning an amazing improvement on the *cudbear* for dying, of which I saw an experiment performed in my own house.

house. Mr Cuthbert Gordon, the operator, dyed a small piece of cotton-velvet, in a few minutes, of a fine crimson colour. He likewise shewed me above twenty different colours that he could stain or dye *woolen, linen, leather, cotton*, and even vegetable substances, with as much certainty as to retaining the colour, and as beautiful, as could be done with *cochineal*, or any other drug. An acquisition of this kind will be of inestimable service to all the branches of *Woolen, Linen, and Cotton*, as it is much cheaper than what is commonly used, and the operation more expeditious. It is made from materials, the produce of almost every hill in this country; whereas the *archil*, made in England, is produced from a weed brought from Cape de Verde and the Canaries, at a great expence, and is inferiour in quality to the *cudbear*. The prejudice, therefore, that we cannot equal the English in colours, is without reason, existing only in the imagination.

Of all the encouragements that can be given to infant manufactories, a ready consumpt for their goods is the foremost: Of this the prospect is already so very flattering, as to insure success to a degree of certainty; and whenever the present differences between Great Britain and her Colonies shall have subsided, depend

upon it, the demands will be considerably increased.

It is well known that there are large and constant commissions for all kinds of Woolen goods, particularly for a coarse kind, called Kendal cottons, made from the clippings and refuse of the Wool, for the West-India settlements. The planters there, since they began to clothe their negroes with woolen in place of linen, have saved the lives of one out of four yearly. This kind of stuff too has been recommended to such of their white servants as are much exposed to the weather, with the same salutary consequences. The reason of this is obvious; the Wool keeps them in a proper degree of warmth in the mornings; and when perspiration increases in the heat of the day, the woolen absorbs it, without any disagreeable or dangerous effects to the wearer.—Linen shirts, on the contrary, in such warm climates, are fraught with the most destructive consequences. They do not afford that comfortable warmth in the mornings which the woolen do; and when the heat increases, instead of sucking up the moisture emitted, they become suddenly wet, appear like a sheet of cold lead upon the body, stop perspiration, and bring on fevers and other disorders, which often prove fatal.

Many

Many other salutary effects attending the wearing of woollen shirts, I collected from my own experience ; and others have been communicated to me, since they were adopted, by the proprietors and traders of those countries, but which would be unnecessary to particularize here, after mentioning the above. I shall only beg leave to observe farther on this head, that as this practice comes to be more general, the demand for this article will proportionably increase, and, of consequence, render us less dependent on the Germans for flax, which they have raised upon us, over all the continent, at least 40 *per cent.* since I have been conversant in trade, and without which article, it is well known, we cannot prosecute the Linen Manufactures, ofsnaburghs not excepted.

I have already proved, that the Woollen Manufacture should be considered as the staple of Scotland ; that it merits the preference to such other branches, for the prosecution of which we are obliged to furnish ourselves with the principal materials from foreign countries ; and that it cannot be looked upon as the least hazardous. On the contrary, every clog to its perfection being removed, the attention of the public engaged, and the thing itself happily begun, nothing now remains, but to recommend emulation

tion among those who move in exalted spheres, and to convince them that the future opulence and glory of Scotland depends, in a great measure, on their wonted generous and patriotic exertions, to give stability to this important branch; a branch which alone has raised our sister kingdom to eminence, and marked her as the first commercial nation in the known world.

Trade and Manufactures are the instruments by which kingdoms arrive at power and consequence; by which individuals arrive at wealth and independence. They enable us to keep up fleets and armies, equal, if not superiour to any power in Europe; by which we check the insolence and humble the pride of our natural or avowed enemies. In this point of view the Woolen Manufacture is proved a national concern, and therefore ought to be strongly countenanced by the nobility and gentry. What can the dignified and opulent be engaged in that will redound more to their honour, than endeavouring to promote industry among Plebeians, and internal commerce among themselves, by wearing and recommending goods of our own manufacturing; especially as we have advantages that favour the attempt far superiour to the English themselves.

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The late situation of English commerce with Scotland was somewhat similar to a merchant in affluent circumstances, who, on account of the extensive trade he enjoys, becomes haughty and insolent to his customers. The case now is widely different. An English rider (a species of locusts who have long infested poor Scotland) can no longer boast of carrying from this country twelve thousand pounds in a single journey. No, the same manufactures we purchased from them at enormous prices, we now fabricate ourselves, for less than they can, and are able to undersell them at foreign markets. Thus prompted by the dictates of interest and honour, we see in almost every corner of Scotland plans, associations, and systems for trade and manufactures; and we find ourselves as decently and as comfortably clothed at home in the Wool from our own mountains, as we ever could be from the flocks of England and Spain. Let us then, in the name of all that is dear to us, steadily resolve to continue to give employment to our own people, and to keep our money at home, and we shall soon be as rich and independent as our neighbours, and look down on them with that scorn and contempt, with which opprobriousness they have long treated us and our country in the most ignominious manner.

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What real pleasure it must afford every lover of his country to observe such a number of noblemen and gentlemen, of the first estimation in the kingdom, not only giving their aid by purchasing the manufactures, and wearing them on public occasions, but even subscribing liberally towards their support. Such laudable examples have diffused a general spirit of emulation through the whole kingdom; every individual seems to vie with his neighbour who shall best promote the happiness and welfare of his country. This is public spirit; this is real patriotism; very unlike that detestable spirit which, falsely assuming that name, has gone forth and spread itself wide in our neighbouring kingdom, as well as in the colonies, and whose baneful influence, as far as it extends, has thrown every thing into anarchy and confusion.—Let us avoid their mode of conduct; and, instead of instilling into the minds of the common people a notion that government is acting arbitrarily or tyrannically towards America, let us supply them with plenty of work, and keep them engaged in their proper sphere; and shew them an example of obedience to lawful government, instead of filling their heads with politics, in which they have no manner of concern. The one will afford them comfortable subsistence for themselves and families; and, while it makes them good and loyal subjects, renders them

them happy and secure: the other, at the same time that it distracts their understanding, renders them obnoxious to society and good order, and in the end brings them to beggary and ruin.

I have already observed, that the county of East-Lothian was particularly adapted for the feat of Manufactures, and I am happy to inform my readers, that the gentlemen and farmers in this county, reflecting with regret, some few years since, on the decayed state of the Woollen Manufacture, which they justly consider as the staple of Scotland, resolved to give it every encouragement in their power; for which purpose these patriotic-spirited gentlemen have entered into a copartnership, under the best regulations, appointing Messrs Sawyers and Hamilton, gentlemen of great knowledge and skill in their profession, to superintend the work. The plan of this society reflects honour on the abilities of the projector, and is perhaps the best that could possibly be devised. There is hardly a single head of a family in the whole county, who is not, or has it not in his power to become a partner, as subscriptions so low as five pounds are received into the copartnership, which intitle the subscribers to a proportional dividend of the profit, and to a share of the privileges equal with those who subscribe ten times that sum. At the same

same time, to prevent any undue influence, which the rich might be inclined to exercise over the middling and lower ranks of people, no person is allowed to subscribe to this capital (which was proposed to be augmented to three thousand pounds sterling) more than one hundred pounds. It is also provided for in the articles, that none of the managers shall interfere in the politics of the county, or the burghs, as such interference might prove inimical to the copartnership; very bad consequences having often been experienced from party elections, even among the dearest friends and nearest relations. A company, therefore, whose existence, in a great measure, depends upon the unanimity of the whole members of which it is composed, should guard against every possible chance of being disunited. It is not their interest, for the sake of making one friend, to run the risk of creating a number of enemies. They ought rather to cultivate a good understanding with every one; and surely, there can be no better method of effecting it, than to steer clear of being concerned with any particular party, especially in political matters. This resolution is highly commendable, and while it is strictly adhered to, solicitations from neither of the contending parties will be made, and the company enjoy, by these means, the countenance of both.

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It is impossible this undertaking should fail of success. The partners are, in a great measure, able to furnish the Wool for themselves; and no country can be better situated for carrying on the Manufacture, it being supplied with plenty of fine water, and firing in abundance, extremely cheap. Nay, though the Company should meet with sale from no other quarter than the county itself, which is not the case, (nor could it even be supposed), yet they will consume in cloathing for themselves, their families, and labourers, a quantity sufficient to employ a number of industrious people, from which will accrue a very handsome profit to each of the copartners. Besides these advantages, this Manufacture, as I observed before, will open a new species of business for their sons, whom they are often at a loss to dispose of; and considering the various kinds of work necessary in the different branches, there is no person from six or eight, to sixty and eighty years of age, but may be advantageously employed in the several departments.

The author of a late publication, entitled *Eight Sets of Queries*, by a Peer of the Realm, was pleased to give me the honour of being the promoter of the above scheme;

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and

and was otherwise so partial to my zealous endeavours to serve my country, that he loaded me with encomiums. The approbation of so great and sensible a man cannot but be pleasing to him who has the good of his country only at heart: and I candidly acknowledge, that next to the satisfaction I feel in seeing my honest efforts crowned with success, the good opinion of this truly public-spirited Right Honourable author, holds the second place in my mind, and prompts me to continue such offices of service as my abilities are capable of suggesting.

At the same time I recommend the most serious perusal of these useful and sensible *Queries* to the inhabitants of this country, I must beg leave to inform the author of them, that though I first proposed the scheme above taken notice of, at a very numerous meeting of the gentlemen farmers in East-Lothian; yet, be it remembered, to their honour, that it was instantly and unanimously adopted. They met me most willingly more than half way; and therefore, it would be injustice not to attribute that merit to them which is so justly their due.

It is with the utmost satisfaction I can inform my readers, that, about two years ago, his
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Grace the Duke of Argyle † established a Woolen Manufactory at Inverary, for the encouragement of which, his Grace not only subscribed five hundred pounds sterling, but has likewise built houses necessary for carrying it on, and most generously complimented the company with all the requisite implements and utensils. The foundation of this manufactory redounds greatly to his Grace's honour and humanity, who, by this patriotic action, has provided lasting employment to the poor labourer, through all the seasons of the year. Inverary is well situated for the seat of the Woolen Manufactures, three parts of the county of Argyle being now under Sheep-pasture; and the soil, as well as the face of the country around, is well calculated for the breed of Sheep. Thus, while the manufacturer has Wool at hand for the different branches of his trade, and at a reasonable price, the farmer will get more for it when sold at his own door, than when purchased by the English manufacturer, who must

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† *His Grace, previous to this, in conjunction with some gentlemen in the county of Argyle, had given his countenance to a Manufacture of Yarn, for coarse Woolen Cloth and Blankets, at the same place.*

send it home by land-carriage, at the average distance of one hundred miles. This proves clearly, that it is the interest of the landed gentlemen to promote Manufactures: For Manufactures cause a brisk circulation of money; money enables the manufacturer to marry; marriage augments population; population increases consumption; consumption enriches the farmer; and the farmer, by a due cultivation of his lands (the value of which increases proportionally), fills the coffers of the landlord, which must eventually, in the end, bring riches and strength to the nation.

I am not in the least dubious of the success of this manufactory. The company, no doubt, have discernment enough to pick out men skilful in the various branches over which they may be said to preside; and generosity to reward their merit. From the situation of the place living cannot be dear. Indeed the inhabitants of the Highlands are subjected to a duty on coals, which duty is not paid in any other part of the kingdom. Now if this should be found a clog to the prosperity of this manufacture, and render an application to parliament necessary, it is not to be doubted, upon a proper representation of facts, they will obtain the necessary relief. On the whole, as far as we can judge at present, this

this manufactory seems to be in a very flourishing state. It is situated in a country where the principal materials are produced of a good quality, and in great abundance; where there is no other to interfere with it, and from whence there is easy access, by water-carriage, to every part of the globe in which the company may have correspondence.

About two years ago I had the honour of an interview with his Grace and his amiable Dukes; before whom I took the liberty to suggest two branches that might be carried on to advantage at Inverary. The first was simply this: To provide Wool to be spun fit for knitting stockings of all kinds, from ten-pence to five shillings per pair, on the same terms and principles as at Aberdeen; which promotes industry among young people, who begin to knit at five or six years of age, and affords a handsome profit to all concerned. This employment does not keep them from their education, as they are able, with a little experience, to read and knit at the same time; and to prompt them to work in the beginning, I proposed they should have one halfpenny out of every three they earned weekly; and that they should actually see, feel, and receive the money. Their parents, by agreeing to this, would get more than if they

were to pocket all their labour ; and the young ones might easily be prevailed upon to lay out most of their sayings to clothe themselves, and keep them neat and clean. Small premiums should likewise be given annually by the public, in every town or village, to those who spin the greatest quantity of good Woolen Yarn, as well as to those of different ages who knit the greatest number of stockings in a certain time, fit for market.

The other branch I took the liberty to mention, was the manufacture of coarse Woolen goods, such as are fabricated by the Messrs Killgours, on part of Mr Garden of Troup's estate, by Gardenston. These goods are sold from one to four shillings per yard, broad and narrow. It were needless to give here a particular description of this manufacture, as it is well known over all the country. I have not the least doubt but that hundreds of our people are well skilled in it; or that the gentlemen themselves would be ready to give every advice and assistance in their power to those who, being ignorant of it, would be desirous to establish the same valuable manufacture in another part of the country. I cannot omit mentioning to the honour of Messrs Killgours, that they prosecute this branch to an amazing extent. The sum of
money

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money expended yearly among the farmers in the south of Scotland and north of England, on the article of Wool alone, would be an agreeable surprize to every person who is a friend to Scots Woolen Manufactures. In fine, were these branches properly attended to, they would most effectually provide for the poor, be the chief support of charity work-houses, and suppress the numerous beggars in the streets; who are not only considered by the natives as a nuisance to the community, but, to strangers, a striking emblem of Scots poverty.

Now, though I reflect with an uncommon degree of satisfaction on the aid offered by the first nobility in Scotland, as well as that of many gentlemen in high offices, and of great fortune, for promoting and furthering the Woolen Manufacture of their country; yet it is not from these alone, great as their influence and example may be that we may expect the establishment, of this great staple. It must also meet with the joint support of the gentlemen of moderate fortunes, farmers, traders, mechanics, and middling sort of people, before we can expect a proper consumpt: In short, there is no individual, whatever be his station in life, high or low, rich or poor, but may more or less contribute to crown these laudable endeavours with the wished-for

ed-for success. Now, as the county of East Lothian possesses many advantages not common to others, it is some years since I cast my eye upon it, and recommended it to its inhabitants as the most proper to take the lead in a matter of such great national concern, knowing it to be most likely to bring it to maturity. I had every reason to believe other counties would catch the noble flame, and that the good effects it produced would not long be confined in so narrow a compass. In this, I am happy to say, I have not been mistaken; for it is well known, that, within these few years, one or more of the different branches of this lucrative manufacture have been set on foot, and even attended with success, where, perhaps, seven years ago it might have been thought impracticable.

The farmers in East Lothian, indeed, may be said, in general, to be more wealthy than those of most other counties, which may oblige the latter to make their scheme upon a narrower scale, and not attempt at first to fabricate cloths of so fine a quality. Suppose the subscriptions in these counties should be so low as fifty shillings, and the highest not to exceed fifty pounds: even this would raise a sum sufficient to open a manufactory which might supply themselves and neighbours; and when brought to bear, as the demand

demand increased, their capital might be extended. This method is the most prudent and rational; and I am persuaded there are not wanting public-spirited gentlemen in every county of Scotland, who would willingly assist infant manufactories with their purses, advice and interest.

The late fatal emigrations have lost many people to this country, who, in all probability would have stayed at home, if they could have been properly employed. The present alarming exigencies of the state are now draining away our youths by thousands, some of which, it may be presumed, were our most useful hands. It seems then highly expedient, that we should devise means of giving bread to those who remain, lest, some time hence, our country, at best but thinly inhabited, should become altogether depopulated. The surest way to prevent this is to prosecute the Woolen Manufacture with the utmost vigour. Is there any branch followed in this country, by which the common people can get so much money? None. Is there any more lucrative to the master? None. Is there any which promises such constant employment? None.—And have not the first people in the kingdom patronized it? Surely, this cannot be denied.—If, then, the public in general resolve to encourage it, as I am certain they will, the
 manufacturer

manufacturer himself has little to fear, provided only his goods be well made, that he sells them on a par with the English, and allows purchasers the same credit, or an equivalent discount.

The Trustees, within these few years, have given some degree of countenance to the Woollen Manufacture; but, I am sorry to say, it is not equal to what might have been expected. They have indeed offered premiums; but they are of so trifling a nature, especially for broad cloth, that few people have been tempted to become competitors. In my humble opinion, if they had advertised some premiums in cash to be given to the merchant or manufacturer who should export the greatest quantity of Woollen Cloth, and gold medals to such noblemen and gentlemen as imported the best rams into the country for improving our breed of fine-wooled Sheep, the good effects thereof would have been felt some time ago; and until plans of this kind be adopted, and the premiums adequately proportioned, it cannot be expected that the nation in general should enter into the true spirit of this important branch, so capable of raising Scotland to the highest pitch of glory and opulence.

On the 23d of January 1775, I proposed that the Linen-Hall, which is under the direction

tion of the Trustees for Fisheries, Manufactures, &c. should take in Woolen Cloth in the same manner as they do *Linen*; that two thirds of the value should be paid the proprietor on delivery of the goods into the Hall, after being valued by people of skill; that the remainder of the price should be paid when turned into cash; and that the manufacturer should be liable to no charge whatever, except legal interest for the money advanced. If this plan had been adopted, the manufacturers might have brought their goods to market at little expence, and have been supported with money to carry on their trade. Nay, the Bank itself, which had afforded the supply, would have received great benefit, as the honest tradesmen, instead of cash, would have taken notes, and circulated them about the country. Banks were originally instituted for such purposes as these; the utility of which may be traced by ancient custom; and the security of pledges of a staple commodity, has always been looked upon as the most certain fund. Witness the Banks of Amsterdam, Venice, and Hamburgh; who, adhering strictly to this maxim, receive no other security than real value pledged with them.

A few months after I had made the above proposition, the Trustees accordingly ordered,
that

that Woolen goods should be received into their Hall, on the same terms as the Linen. But these, as I have heretofore observed, are so very disadvantageous to the manufacturers, that, instead of affording them relief, it seems rather calculated to put money into the pockets of the servants in the Hall: for the different gratuities they receive do not amount to less than *5 per cent.* upon every piece of Linen cloth disposed of in that Hall; an expence which the profits made by Linen especially can by no means bear: nay, I am very certain, that many of the manufacturers of that commodity would think they gained much, provided they had a clear gain of *5 per cent.* accruing from their trade. How absurd, then, must it be, to distress the greater part of the manufacturers in the kingdom, in order to enrich one or two mercenary servants of the public?—Would it not be more eligible to give these men a suitable salary out of the public money, than allow them thus to prey upon the industrious, and draw the profit which most properly belongs to the manufacturer?

The Linen Manufacture being thus distressed, though it has long been the favourite of the public, it is not to be wondered at, if the Woolen (looked upon by some with a jealous eye) should meet with the same, or a worse fate.

fate. This has accordingly happened; for they not only demand the same exorbitant *per cents*.—but, what is most extraordinary, and would scarcely have entered into the imagination of any one, except those who think of nothing but their own private emolument, *English Woolen Goods* are likewise received into our *Scots Linen Hall*!—Such conduct as this cannot well be accounted for. That a hall, erected and opened for the sale and encouragement of the Manufactures of Scotland, should be made a vehicle for the disposal of goods of another country, is a proof that we have not the least spark of patriotism, and that we are entirely regardless of our own interest. If a practice so absurd, and so inimical to the welfare of this country, be not immediately suppressed, the bad consequences arising from it will be severely felt: For I am persuaded, had those concerned in it enforced their utmost invention to find out a method to crush our Woolen Manufacture in its infancy, they could not possibly have fallen upon an expedient which would more effectually have answered the purpose.—I am willing, however, to believe, that these destructive measures have been adopted without the knowledge, or at least without the consent of the Board of Trustees.

From the above impartial state of the case, it will reasonably be concluded, that too much has been entrusted to the servants in the Office; who, on their parts, have not been over scrupulous in discharging that confidence reposed in them.—Many of the honourable members of the Board were some time since convinced of the necessity of altering the present plan, and resolved to give all possible aid to the Woolen Manufacture: They saw the bad tendency of allowing their officers discretionary power, as to the distribution of the several premiums; and wished not to have them classed in that disproportionate manner in which they then stood; observing, that it was ridiculous in the highest degree, that the same premium should be allowed for the best dozen of hats †, which was offered for the six best pieces of broad cloth. The former might have been manufactured for twelve guineas; while the latter would require a sum greatly exceeding one hundred pounds sterling.

Though premiums of this kind are essentially necessary to excite emulation in workmen, a
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† *The candidates for this article ought to be confined to such as they sell at one guinea each, reserving to themselves a moderate profit.*

great mean of bringing infant manufactories to perfection,—yet I am far from thinking this alone sufficient, be they ever so well proportioned.—It is the encouragement of the public at large that must bring undertakings of such national importance to that degree of reputation which alone can stamp them with success; and as every individual is a part of that public, I hope none will entertain the opinion, because he is single, his efforts can be of little significance. This is far from being the case: Companies of people, entering into associations to use nothing but the manufactures of their own country, will, no doubt, have a more immediate effect on the consumption of these articles: But, on the other hand, where individuals are, perhaps, unconnected with societies of the above nature, from choice, or any other motive, they may discover as much public spirit, and do as much essential service to their country, as if they were really enrolled under their banner, by purchasing every article they stand in need of that is manufactured at home.

On this occasion, I cannot help informing my readers, many of whom may be ignorant of the thing, that, about two years ago, a new Academy was established at *Madrid*, under the title of "*The Friends of their Country.*" The de-

sign of this institution is, to encourage agriculture, manufactures and industry, arts and trade, which are visibly decaying in Spain. The Prince of Asturias, the Infants Don Gabriel and Don Antonio, the Marquis de St Croix, the Prince Pignatelli, the Duke de Crillon, the Count de Montalvo, the illustrious Campomanes, and other grandees of the Court, have caused their names to be inscribed in the list of Academicians; and the King (ever attentive to the protection of establishments advantageous to his subjects) has not only approved of the institution and statutes of this Academy, but has also been pleased to assign a sum of money for an annual distribution of two premiums, to be given to such agricultors, manufacturers, or artists, as shall distinguish themselves in their profession.

The title this society has assumed, which is, *The Friends of their Country*, is a glorious one indeed, and what every true Scotsman should be proud to deserve. Would it not be highly praise-worthy in the city of Edinburgh, assisted by the nobility and gentry of Scotland, to establish a similar one here?—Two years ago, an association was formed at Hamilton, by a number of patriotic gentlemen, who determined to countenance nothing but the manufactures of their

their country ; so that each person wearing a suit of Broad Cloth, of Scots Wool and manufacture, actually maintains one of his poor countrymen, together with his family, two months of that year. This is the best mode of charity that can be practised, and in which there is more merit than giving a beggar sixpence to get rid of his importunities.—A good example, by whomsoever given, is always worthy of imitation ; and I have a better opinion of my countrymen, than to imagine they will hesitate a moment to pronounce the above-mentioned institution of the nobles at Madrid, as well as the association at Hamilton, truly meritorious.

I have already observed, that every individual has it in his power (let his station in life be what it may) to testify his patriotism to his country ; and I am happy to have it in my power to declare, that Scotland inherits a number of such patriots.—To enumerate the whole instances would fill a volume of itself ; but there is one in particular that I cannot pass over, as, if followed by others, it would increase the internal consumption of woollen cloth, hats, &c. to a surprising degree ; and which institution (though on a much smaller scale than that of Madrid) reflects a proportional share of merit on the projector and encouragers.

A number of tradesmen here have formed themselves into a society to encourage Scots Manufactures. They have chosen a treasurer, who collects five shillings monthly from each member, which money is lodged to purchase complete suits of clothes, of home fabric; and in order that no dissention may arise among them who shall be first supplied, the event is determined by lot. Thus, every one in the society is furnished with a complete suit, from head to foot, at so small payments as five shillings monthly; a sum which every industrious mechanic may spare, without distressing, in the least, either himself or family. If this method were generally adopted by the labouring part of mankind, and even by those in middling stations of life, at their convivial meetings, throughout Scotland, each would contribute much to his own interest, to that of his country, and to his fellow-tradesmen of every denomination.—But to return to, and conclude the subject of premiums.

The chief, and almost the only purpose that premiums can answer, or at least such as the Board of Trustees are enabled to offer, is, to excite and cherish an emulation among the various manufacturers, to excel each other in their different branches, as to the fineness and quality
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of their goods; and, at the same time, to afford them some reasonable hope, that if they be successful, the premium will indemnify them, even though the article for which it were granted should not find a ready market. When manufacturers, by the encouragement granted by the Board, shall be convinced of this, they will esteem *honour* preferable to the trifling advantages annexed to the article under competition; and a true spirit of emulation being once roused, depend upon it, it will not easily be damped. We are all apt enough to put the full value upon our merit; and if a candidate prove unsuccessful this year, he will not, on that account, give up the contest for the next; flattering himself with abilities and means to manufacture goods of a quality no wise inferior to those of the successful candidate. The creating and keeping alive such spirit, I say, should be the principal view in granting premiums; and if due attention were paid to them, the most salutary effects would ensue: For, when a person has attempted an improvement in any thing practicable, pride will not let him give it up until he has brought it to the highest point of estimation; nor will he be discouraged from proceeding, even though he should be at first unsuccessful.

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From what has been premised, it is evident, that no country in the world is better situated for carrying on the Woolen Manufacture, since we enjoy many superiour advantages over our neighbours. I do therefore most earnestly recommend it to the patronage of the Honourable Board, particularly that of the Broad Cloth, under whose auspices it must succeed, especially as we have already brought this branch to such a state of perfection, that no Scotsman need be ashamed to wear the manufacture of his country.

Besides our own consumpt, this article would find a ready and profitable sale at foreign markets; as a proof of which I shall advance what I have gathered from my own experience. In my juvenile years, I purchased some pieces of broad cloth, from four to ten shillings per yard, and some dozens of stockings from twenty-pence to four shillings per pair, of the manufacturers, and took them to Hamburgh; where I bartered them for such goods as had a quick demand, attended with good profit, at home. For the stockings that cost me twenty-pence *per* pair, I got, in exchange, one yard of Linen, valued there at thirty stivers, which I sold on my return to Edinburgh at three shillings per yard, and was thought a great pennyworth. All my
hose,

hose, together with my broad cloth, went off in that proportion for several voyages, until I ceased going to sea; and, unfortunately, I could not meet with a proper person to transact my business.—Had I continued myself some years longer, and dealt in no other article, it is beyond a doubt I should have accomplished what we all aim at. From this traffic, I have shirts by me fit for any man of business to put on, that have had their ordinary course of wear, for twenty-six years past, which cost me no more than a pair of stockings per yard, value one shilling and ten-pence at Leith. It is true they are now, like myself, the worse for wear; but, as a proof of the preference this Linen has over Scots, I must declare, that only seven years ago I purchased some of this, which cost me five shillings and three-pence *per* yard, and it is now all to rags; though the shirts made of it were no oftener worn than in common rotation with my old Hamburgers.

I could not refrain mentioning the above circumstance, as it corroborates what I have said before on the Linen Manufacture; and shews how ridiculous it is to attempt to rival other countries in what is their natural staple; and the more especially, as we can be supplied with that very article from them (without taking money

ney out of the country,) by bartering our own commodities, and cheaper than we can make it ourselves; at the same time the goods bartered are the natural production of our own country.

Leaving now the Broad Cloth Manufactory, to which I sincerely wish success, most earnestly recommending it to the encouragement and patronage of the public, as a thing of the utmost consequence to the prosperity of this country,—I shall proceed to give my thoughts on the Stocking Manufacture, another branch that merits particular attention.

CHAP.

C H A P. III.

S E C T. II.

Of the Stocking Manufacture.

THE Stocking Manufacture has long been prosecuted with no small degree of success in different counties of Scotland; but, on account of a predilection for foreign Manufactures, in prejudice to our own, a vice peculiar only to the British nation, we do not even supply ourselves entirely with this article: Whereas, were we to follow the example of the Dutch, French, and other wise nations, who most politically prefer their own commodities to those of every other country, we might not only manufacture every pair of Stockings necessary for our own consumption, but also export great quantities abroad.

Scotland is unquestionably possessed of materials with which Stockings can be made from six pence to ten shillings and six-pence, nay even to forty shillings

shillings per pair; and I can say, from my own experience, that I have purchased them here of a better quality, and cheaper by 10 *per cent.* than I ever could those of English fabric at any shop in Edinburgh. Notwithstanding this, to our shame be it spoken, I have known some shopkeepers in this city remit, or pay to those people called *English Riders*, but more properly *The Drainers of our Specie*, from three to four thousand pounds sterling annually. But that this should continue to be the case, is as extraordinary as it is unaccountable, seeing we possess many eminent advantages over our industrious neighbours. The price for spinning, labour and provisions, is infinitely cheaper than in England; especially firing, which is a very essential article, and with which almost every part of this country is plentifully supplied.

There is no difficulty, however, in assigning a reason why, a number of years ago, we should consume a large quantity of English manufactured Stockings. That country was the first which invented and practised the method of weaving in looms; by means of which invaluable machine, the manufacturers could afford to sell Stockings cheaper than those who caused them to be knit by hand. But now that we have the same machines throughout every part of Scotland, and
workmen

workmen of equal abilities, who can furnish the public with goods of the same quality, and at lower prices, we must certainly be altogether inexcusable if we give the preference to those of English Manufacture, or any other country, merely because they are of foreign fabric. And as to knit stockings, I dare boldly affirm, that Scotland stands unrivalled in this article, whether they be considered in their price, quality, or fineness.

I have already mentioned, that after supplying the demands of our own country, the overplus, however great the quantity, will meet with a ready sale at foreign markets; among which are the Seven United Provinces in Holland, where they will sell to good account. Campvere, a free port, gives great encouragement to this valuable staple; and at Bremen, Hamburgh, Lubeck, and Dantzick, all free ports, they are purchased with great avidity, and afterwards sent from these places to the greatest part of Europe.

The Zetlanders, sensible of their own interest, and tenacious of independency, have long made great quantities of coarse Stockings for the Hamburgh market, for which they get good returns.—I have had Stockings made of the wool of that

country so fine as to equal silk, which lasted longer than any four pair of silk or worsted Stockings I ever wore. Indeed, I have been informed by an English gentleman, thoroughly conversant in these matters, that the wool of this country is as fit for making Stockings to any degree of fineness as that of England, Spain, or any other country.

That the Wool of Zetland is of an extraordinary quality, and proper for making up into fine Stockings, is evident from the great demand for it at Aberdeen, the principal seat of this manufacture.—This Wool is brought annually from the Highlands in the months of July and August, immediately after shearing-time, and exposed for sale in the public market-place of Aberdeen. Among the fleeces of the smaller kind is found Wool, finer than, and preferable to, any Spanish Wool for the above purpose. The fine pair * of
Stockings

* *The Magistrates commissioned, for the above purpose, some of the finest Spanish Wool from London, without paying any regard to price. When it came, the women who were to spin it complained of its coarseness, and prevailed on their employers to wait till July, the time the Highland Wool is usually brought to this market; from*

Stockings made a present of to Marshal Keith by the magistrates of Aberdeen, and from him to the Empress of Russia, valued at five guineas, were manufactured from this very Wool.

A person who signed himself *A Stocking Manufacturer* at Aberdeen, but whom I take to be *A Snake in the grass*, animadverting some time ago on that excellent pamphlet, entitled *Eight sets of Queries*, written by a Peer of the realm, avers, that improving the Wool of the Sheep in that country, would be of far less essential service to the Stocking Manufacture there than is generally imagined. He affirms, that nothing but skin Wool is made use of in this manufacture, and that, although the county of Aberdeen should produce as good Wool as that now

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used,

which they would undertake to spin threads as fine again as they possibly could from the Spanish Wool. The Highland Wool was accordingly bought, and from a pound weight of it, they span forty-two thousand yards in length, which was nearly the double of what could be produced from the Spanish Wool.—In short, the Stockings when finished were so amazingly fine, that they might both together with ease have been drawn through a ring of an inch diameter.

used, unless a market could be found to consume as many Sheep as would furnish constant employment to the manufacturers, they could not be benefited, as all the Sheep at present slaughtered in Aberdeen, in that season of the year when the Wool is most valuable, would not furnish one hundredth part of the quantity consumed by the different manufacturers.—As the author of the above sentiments seems to be inimical to the bettering of our breed of Sheep, and otherwise but ill acquainted with the Wool proper for the manufactory of which I presume he is master, I shall endeavour to prove the fallacy of his reasoning by arguments drawn from my own and others experience.

The material difference between *skin* and *fleece* Wool, if such there be, must consist in the last being longer than the first. Now the length of the pile of Wool, so far from being an objection to the Stocking manufacture, if with its length it has a proportionable degree of fineness, it is justly considered as more valuable.—Every body knows that the manufacturers of Norwich are chiefly supplied with *fleece* Wool from Lincolnshire, for carrying on their extensive manufactures of crapes, gauzes, &c.; from which it must follow, that the same kind of Wool would be as proper for making Stockings as crapes, poplins,

poplins, and other kinds of stuffs.—Nottingham, the emporium for Stockings in England, as Aberdeen is for Scotland, is supplied with Wool from that county, and Leicester. Nor do the manufacturers use any, or but very little *skin* Wool; and yet their Stockings are as fine as those fabricated at Aberdeen, supposing them to be all made of skin Wool.

The notion that some of the Stocking Manufacturers have imbibed, that skin Wool is better for their purpose than fleece Wool, is altogether chimerical, and forced upon them, through motives of interest, by the London Wool staplers, who make use of every device to persuade the good people of Aberdeen, that it is impossible for them to be so well and so fitly supplied with that article as from themselves. Besides, it is a matter of doubt with me whether one person out of ten can distinguish skin Wool from fleece Wool; and whether the latter is not sometimes palmed on them for the former, with a view to monopolize the trade. Be this as it may, the Wool they get from London is found to answer their purpose; and so would their own country Wool, provided they would either sort it themselves, or get a proper person to do it, as all fleece Wool is obliged to be, before it can be wrought up in the various branches of the

Woolen Manufacture. Let them one and all resolve to try the experiment, and I will be answerable for its success. Let them, I say, purchase the Wool produced in their own, and the adjacent counties (they can purchase it 15 or 20 *per cent.* cheaper than that they get from London;) it is a duty they owe to themselves and their country; and it will enable them to sell their goods cheaper both at home and at foreign markets, which will secure them a desirable superiority over their competitors in this branch.

The Stocking Manufacture has two considerable advantages over that of the Broad Cloth, which are, first, that a Stocking Weaver, from the time of clipping the Wool, can have his Stockings at market in three weeks; a Weaver of Broad Cloth, his Broad Cloth not less than six or eight weeks: the former can be carried on with little money; the latter requires a large capital, the want of which is distressing to the ingenious mechanic, and a great obstruction to the improvements of a country. Happily, however, this obstacle is, in a great measure, removed, by the public-spirited conduct of several noblemen and gentlemen of property, who, with a disinterestedness worthy of their exalted characters, have established manufactories of various kinds in different parts of the country; not so much

much with the view of reaping any advantage to themselves, as giving bread to the hungry, employing the *young* as well as the *aged*, and thus rendering *those* useful members of society, even in infancy, who, without being early inured to labour, and initiated in industry, might have proved the very bane of it; while *these*, by being supplied with such work as is adapted to their failing strength, instead of becoming burdens upon the public, are enabled to gain a comfortable livelihood; bidding defiance to abject poverty, and holding the charity work-house in honourable contempt.

Such laudable actions as these reflect more honour to the humanity of the performers, than if they had bestowed half of their estates upon the indigent. The one is rendering a *lasting* service to his country, and doing present good to the individual; the other may be the mere effects of a milky disposition, not able to resist the sight of an object in distress, and therefore is ready to afford him a small temporary relief. This is undoubtedly charity; and I should be sorry to give it any other name; nor do I ever wish to see the bowels of compassion shut against the calamities of my unhappy fellow-creatures: But this I am certain of,—he who affords employment to the industrious poor, driving poverty

verty from their habitation, is possessed of more real charity, and distributes it more effectually than another who, regardless of the well-being of society, gives a small pittance to the beggar, who haunts his door, to prevent him from immediate starving.

Among the number of noblemen and gentlemen, who might be singularized as possessing this disinterested, and noblest of all charities which I have been endeavouring to recommend, I shall mention only two at present; the one is his Grace the Duke of Argyle, the other Lord Gardenstone.

His Grace (whom I have already mentioned on this head, under the article of Broad Cloth, as having, two years ago, established a Woollen manufactory at Inverary), previous to this, had established, at the same place, a manufacture of Yarn, for coarse Woollen Cloth and Blankets. It has been found to answer the laudable purposes for which it was intended, and is now in a very prosperous situation. In this manufactory, sixty or seventy children, belonging to the poor people in the neighbourhood, have constant employment at spinning and carding. Two of these children are allotted to each wheel; the one spinning, and the other carding, alternately,

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as constant employment, either at the one or the other, would be wearisome to such young minds, and tend to create a dislike to any kind of employ: but by changing hands (as they frequently do), they begin again with fresh vigour and spirits, become acquainted with different branches, and look upon their work as an agreeable amusement. These poor children (many of whom are under eight years of age), instead of being a burden upon their parents, earn at least what will maintain them. Besides, they have not that opportunity of becoming early acquainted with those vices which are destructive to society, and almost certain ruin to themselves. They are inured betimes to a habit of honest industry, are an ornament to society, and a blessing to their parents. It would be needless here to expatiate on the numerous advantages which must necessarily result from so wise, so humane, and so patriotic an institution. These will naturally occur to every one susceptible of the nobler emotions; and, I hope, will be a sufficient inducement to others, who are happily possessed of the means, to imitate so praise-worthy an example.

The other instance of public spirit which I am now to relate, is practised by Lord Gardenstone. His Lordship, a few years ago, actually erected
a neat,

a neat, handsome village, situated in a fine country, called the How of the Mearns. Here (under the patronage of so worthy a man) industry is courted by all, and many branches of manufacture, are carried on to a surprising degree of extent and perfection. In order to induce manufacturers to settle in this village, every possible encouragement is offered them. His Lordship not only supplies the inhabitants with ground for houses and gardens, at three-pence per *fall*, but, likewise, most generously gives every well recommended settler in the village his house and garden free for the first seven years, and offers premiums to such as excel in different branches of manufacture. In short, the population of, and improvements made at, this place in so short a time, are beyond conception; the planting and hedging about it are very extensive, and are in a more thriving condition than any I ever saw in this, or any other country where I have had occasion to visit.

But there is one manufactory newly established at this favourite village, which I cannot, in justice to his Lordship's wisdom and humanity, omit particularizing: It is the manufacturing of Stockings in frames or looms, by which they are wrought in a very expeditious manner,
and

and sold at very moderate prices. Besides this, there is a person engaged to superintend this manufactory, who employs a number of persons in knitting Stockings, with a view of supplying his customers with either kinds. The industrious people employed in this place are very numerous; the dexterity of the youths, who spin with both hands at once (either wool or flax), is not less to be admired, than the expedition with which it is executed, having been told of girls, not above twelve years of age, who spin, in this manner, two slips a-day.

The vast improvements made at this place have, no doubt, caused the proprietor to sink a large sum of money: But the heart-felt satisfaction he must enjoy, in being the mean of mitigating the poverty, and relieving the distresses of so many of his fellow-creatures, not to mention the certainty of a reimbursement in due time, will sufficiently compensate for the trouble and outlay his Lordship has incurred on the occasion.

To show you how far examples of this kind influence the conduct of others, I am obliged to declare, to the honour of the gentlemen of the farmers' club in the Mearns, that some time ago, in order to encourage the above Stocking
Manufactory,

Manufactory, they ordered the master to make a pretty uniform of this Stocking cloth, with the word *Plough* stamped upon the buttons, in which dress they always appear at their public meetings.—If similar manufactures were set up in different parts of the country, there is no doubt of their meeting with due encouragement from a generous and patriotic public.

As a final instance of his Lordship's *amor patriæ*, I must also inform my readers, that he lately engaged, and sent north a native of England, eminent in his profession as a wool-comber, who is, besides superintending that branch at Laurence-kirk, bound to instruct, in this business, such young people as his Lordship shall think proper to send to him for that purpose. His Lordship has also under contract a person well skilled in cloth-printing. This gentleman, though a native of Scotland, has long resided in England, where he acquired great skill in cutting patterns for, and executing every part of, the printing business in the most masterly manner. He prints cloths from the lowest to the highest prices, and imitates Indian chints so accurately, that it requires more than ordinary perception to distinguish them from real. My fair countrywomen, upon a just and candid comparison, will, I am sure, encourage the manufactures

factures of their country, in preference to those of the East, seeing they are in no wise inferior as to the quality of the stuff, beauty of colours, or propriety of workmanship.

About two years ago, a public-spirited gentleman established a Stocking manufactory at Dumfries, a place well situated for foreign trade or manufactures, though hitherto but little business has been done in either. Worsted, thread and silk Stockings and Gloves, are all fabricated here; and in point of colour, workmanship and finish, are equal to any manufactured at Nottingham. This undertaking, like others of the same nature, had many difficulties to encounter with; but none so much as that infatuated prepossession which the inhabitants of this country have long entertained in favour of English goods. This is happily removed, which has greatly increased the demand at home; and I am credibly informed, that large quantities of the goods of this manufactory are sent into England, and that some are exported abroad: so that it is hoped the monied people in the town and environs of Dumfries, seeing the success that attends this manufactory, will catch the patriotic flame, and be induced to establish others in the various branches of the Woollen trade.

Any farther eulogium on the patrons and promoters of these, and similar praise-worthy enterprises, were I even capable of doing justice to their merit, might be thought adulatory. I shall, therefore, only add, that while I sincerely wish their noble efforts may be crowned with success, I am certain that ages to come will cherish the memory, and chaunt forth the praises of those men, who, when their country was groaning under poverty and wretchedness, nobly stepped forth, and saved her from ruin, by pointing out a ready and certain road to future grandeur and opulence.

CHAP.

C H A P. III.

S E C T. III.

Of the Hat Manufacture.

THE last article I shall treat of under this chapter is more recently established here than any of the preceding, which is, the manufacture of Hats. This branch of the Woollen trade, tho' not of long standing in Scotland, has, perhaps, been brought to greater perfection than any other hitherto attempted (the Stocking branch excepted). The reason is plain: No person can be employed in this business who has not served a regular apprenticeship for seven years; a time fully sufficient to make any one completely master of his business.

From the materials of our own country produce, we are enabled to furnish the public with hats, from one shilling to twelve shillings and sixpence *per* hat, as well manufactured, and of

as fine a quality proportionable to the price as any nation in Europe. If finer Hats be required, we can be under no sort of difficulty in procuring the requisites; I mean the fur of the beaver, from which we have workmen who can make them from twelve shillings and sixpence to any degree of fineness. We can purchase these materials as cheap, and of as good a quality as our neighbours, it being a branch of commerce not unknown to Scotland; but if we were to commission fur from London, it can be brought to the port of Leith at as small an expence as it is possible to convey it to any inland manufacturing town in England.

Vast quantities of wool are yearly consumed in the coarse kind of Hats, and for those of a middling quality. I am well informed by the most experienced hatters, nay, I have even proved (when treating of the different degrees of fineness of wool, in Chap. I. Sect. I.), that the pile of fur on our hare and rabbit skins, from our northern situation, is superiour to that produced in the southern parts of Britain.

The consumpt of Hats, for the inhabitants of North Britain alone, on a moderate computation, may amount to sixty-five thousand pounds sterling annually. This, without

out including what might be exported, demands our most serious attention. If every inhabitant of Scotland were to wear Hats of our own manufacturing, what service would they not do to their country?—They would not only give employment to men regularly brought up to the business, but also to women, boys and girls, who might be serviceable in carding, picking, and cleansing the materials, as well as in lining and cocking the Hats. The hands thus employed would earn good wages; and the masters (by due encouragement from the public) be enabled to pay them regularly every Saturday, and put them upon an equal footing with their rivals the English.

This branch, important as it may be made to Scotland, requires no other assistance than that our countrymen should part with their partiality for every thing that is foreign. Make a fair comparison between Hats manufactured here and those which are imported from England, and candidly give the preference to those which are best and cheapest. Were this judgment to take place, this manufacture would flourish. Have we not all our materials as good as, and some better than the English? and is there not a constant interchange of

workmen*? And, with respect to wages and firing (the last a principal article in this branch), they are considerably lower than in England. From all which it must appear, the masters themselves being eminent in their profession, that we can manufacture this article here as good and as cheap as at any place in the known world; particularly the coarse kind (which are made all of wool), 20 per cent. lower than our neighbours.

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** It is remarkable that the journeymen hatters are, most of them, great inland travellers. The constitution of their business (for which it has no less than the sanction of a British statute) gives them great opportunities of going from place to place. One master hatter throughout every town in Great Britain, is obliged to employ any man who comes to him, provided he has served seven years apprenticeship, or collect a certain sum from himself and the trade, sufficient to carry him to the next town; and this charge, if there be many master hatters in the place, falls on each by rotation. This is the reason why journeymen hatters seldom remain long in one place; nor can any one of them be employed, or receive the least support, if he cannot produce his articles of indenture.*

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Most of the Hatters in town have taken up the retail business, for no other reason, than because our merchants and haberdashers refused to do them and their country justice. In this I cannot but applaud their spirit, for refusing to be the dupes and foot-balls of these gentry, most of whom (pardon me the expression), have no more knowledge of the goodness of a Hat, than the person who offers himself a purchaser. To prevent, therefore, their being entirely trampled upon by these pretenders to knowledge, in the business in which they have been regularly brought up, several of them have opened retail shops for themselves, and, I will take upon me to say, they deal honourably in their profession, and will, by no means, take an advantage of the ignorance of any one who may apply to them for themselves or friends.

To inform my countrymen they can be served upon better terms by the manufacturer himself than by a person who commissions them from a second, or perhaps a third hand, would be : paying but a poor compliment to their understandings. I chuse rather to rest the force of my argument upon the benefit that must unavoidably result to the country, by encouraging its manufactures, than upon any trifling gain which might center in the purchasers' pockets
by

by applying to the real manufacturer, instead of a haberdasher, who shamefully imports large quantities of goods from foreign countries, with which he could be equally well supplied at home. A conduct like this deserves the severest animadversions; and I sincerely wish the public would retort upon them, by deserting those shops which are entirely calculated to drain the country of specie, and resorting only to such as encourage their home manufactures.

Before I dismiss this subject, I cannot but take notice of two articles which seem to affect the prosperity of this branch.

The first is, concerning the clipping of lambs' Wool.—Being some time ago in company with many of the most reputable hatters in Scotland, the conversation naturally turned upon the preservation of the Wool most adapted for their business; when it was unanimously agreed, that the store-farmers, and all raisers of lambs, ought to clip their Wool off in the month of June or July; that the benefit accruing from such a practice would be considerable, as they would always find ready sale for their Wool; that after being thus clipped the fleece would grow closer, and be prevented from shading; and lastly, that it would hinder the wet from penetrating

trating into the skin, and prevent the lambs from casting their fleeces, which they frequently do at the above time of the year, when nature requires to be assisted.—As the business of Hat-making is in a very thriving condition, I think all store-farmers and raisers of lambs should take the hint; being persuaded it will bring much money into their pockets, and be of essential service to the country in general.

And now that I am speaking of *clipping* or *shearing*, I cannot but observe, that a little of the public money could not be better employed than by sending a few persons, well skilled in the art of shearing Sheep, into some parts of the north of Scotland, the Orkneys, Zetland, &c. where I am informed the farmers are in use to *row* their Sheep, as they call it; that is, to pull off the Wool with their hands, much to the hurt of the Sheep as well as to the loss of the Wool.—These Sheep-shearers should be furnished with the proper implements for cutting the Wool off the Sheep in the same manner as practised in this country; though I presume the English are much cleverer at Sheep-shearing than ourselves.—They should likewise be directed to instruct them as to washing the Sheep, cleansing the Wool, and every necessary operation that can tend to preserve the Wool and the animals themselves.

themselves. Premiums of this kind would be of more real service to Scotland in one year than all that have been given by the public to force the *Linen staple*, since the union of the two kingdoms.

The second article I have to mention is of the utmost consequence to the Woolen Manufacture; and that is, respecting the *cards* made use of in every branch. It has for some time been a subject of complaint that most of these instruments used in Scotland have been such as were deemed useless by the English, which report tends greatly to injure the manufactures of this country. Every one who knows any thing of this matter must be sensible that, when the teeth of the cards are broken or destroyed, it is impossible to make the *rowings*, as they are called, even: the thread suffers in the same manner; and when it comes to the cloth, instead of being even and smooth, as it ought to be, innumerable knots appear upon the surface.

Our wise neighbours, the English, foresaw the bad effects that must unavoidably attend such a circumstance; and, for that reason, an act of Parliament was passed in the reign of Charles II. prohibiting the importation of foreign Woolen Cards, in the following words: "WHEREAS,

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by the acts of Parliament made in the third year of King Edward IV. and the thirty-ninth of Queen Elizabeth, and several other statutes before that time made, it is enacted (among other things therein contained), That no cards for wool, nor iron thread (commonly called *white wire*), shall be imported, sent, or conveyed into this realm of England, wherein the best iron thread, or wire for making wool cards is made, and by the said manufacture of making and drawing of wire, and wool cards, very many poor people of this kingdom, and their families, have been employed and maintained, and the wool cards made thereof are of great concernment to this kingdom, for the good making of Woolen Cloth : **AND WHEREAS**, contrary to the said statutes, not only much foreign card wire, but also foreign wool cards, have been in these late times imported into this kingdom, and also within the same, many old wool cards are, by ill disposed persons, (for their private lucre), bought up, and the old iron-wire, of the said old wool cards, being very weak, and insufficient for the well carding of wool, is put into new leather and new boards, and so altered and sold to ignorant people, for new wool cards, to their great detriment, and the endamaging of their work, carding of wool, and the cloth made thereof : By all which very great inconveniencies have been found, by experience

rience of clothiers, in their making of English cloth, which is lately much debased and decayed, and wherein this nation is greatly concerned, to uphold and encourage the well making thereof, in and by all ways and means, in any ways conducive thereunto : Be it therefore enacted, by the King's most excellent Majesty, by and with the advice and consent of the Lords Spiritual and Temporal, and the Commons, assembled in parliament ; and it is hereby enacted, by the authority aforesaid, that no foreign wool cards, or foreign card wire, or iron wire for making of wool cards, be imported into this kingdom of England, dominion of Wales, or any part thereof, nor used within the same, nor any card wire taken out of old cards be from henceforth put into new leather, and new card boards, nor any such wool cards, made thereof, be put to sale, upon the pains, penalties, and forfeitures hereafter following ; that is to say, every person or persons, who shall import, or bring any foreign wool cards, or foreign card wire, or iron wire, for making of wool cards, into the kingdom of England, dominion of Wales, or any parts thereof, or make any wool cards of any such old card wire, as aforesaid, or put the same to sale, shall forfeit the said wool cards, and card wire, or iron wire, for making wool cards, or the value thereof, if the same be not seized, the one half part thereof

thereof to the King's Majesty, and the other half part thereof to such person or persons who shall first seize, or sue for the same, by action of debt, plaint, bill, information, or indictment, in any of his Majesty's courts of record at Westminster, or within the county, city, burgh, or town corporate, where such offence shall be committed, wherein no essoin, protection, wager of law, or injunction, shall be allowed or admitted.

“ Provided always, that this act shall not extend to hinder the owners of any wool cards to cause them to be amended for their own use, or to transport or sell (for transportation only) all their old worn wool cards, in parts beyond the seas, out of his Majesty's dominions.”

Though it might have been expected, that this act would have extended so far as to prevent the importation of these second-hand cards; and though the act itself might very naturally bear such a construction; yet as no man, nor particular body of men, are thereby directed to put the same in execution, it has been a constant practice to import annually into Scotland, several thousand dozen pair of second-hand cards, to the very great detriment of the Woollen Manufacture; the raw material having been thereby

injured, by a moderate estimation, at least six per cent.

So sensible were the principal Woolen Manufacturers of this country, of the great loss the continuance of such a practice must be, not only to themselves, but to the business in which they were engaged, that several of them presented a memorial of the facts to the Board of Trustees, so far back as November 1773, craving that Honourable Board would recommend the subject of their petition to the Royal Boroughs and their commissioners, to apply to the legislature to have the prohibition actually extended to Scotland.

The above application was made at this time, in consequence of the memorialists being informed, that a law was expected to pass the then next session of parliament, making sundry regulations with respect to the manufactures of this country; and that these regulations were principally to be pointed out by commissioners employed by the Royal Boroughs of Scotland.—No notice, however, has hitherto been taken of this memorial; for what reason I am yet to learn. It is plain, however, that so great an evil requires a speedy and effectual remedy, as the very existence of our Woolen Manufacture,
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in a great measure, depends upon it.—A redress of this grievance would considerably augment his Majesty's revenue of excise; as a vast number of hands would be employed in making cards, that would consume annually at least 2000 lib. weight of leather, which pays a duty three halfpence *per* pound.

I should not have been so prolix on the subject of the Woollen Manufacture, were it not a thing of the utmost importance to this country, in which light, I presume, it will be taken by every impartial reader. Many other branches of a secondary nature, in the Woollen way, might have been enumerated; but as they are of less moment than those I have treated on, and such as are well understood, I have waved a discussion of them, to give place to others that are of much more consequence.

From what has been said, I hope I have clearly demonstrated the possibility, as well as the necessity of increasing the number, and improving the breed of our Sheep, which is the first and principal object of concern, if ever we mean to make a figure in the Woollen branch.—With respect to the Linen, it is the height of folly ever to pretend to rival the Germans, or, indeed, to think of bringing it to such a state of perfection.

fection as to be of national service, meriting the appellation of a staple commodity. The population of this country will never be increased by reducing the quantity of arable land, sowing it with *lint-feed*, and neglecting the pasture which ought to produce Wool, but by getting people to work at the Woolen branch, and employing the land now in tillage for their support. This alone can increase population, employ our poor, and make us rich and happy.—This will enable us to purchase the productions of other countries, by an interchange of commodities, without draining our island of cash :—This, I say, independent of that great *staple* the *Linen*, is able to restore us to our former dignity,—to diffuse happiness to the most indigent,—and prevent riots, discord, and debauchery, the direful effects of poverty and laziness.

Permit me once more to address the Public at large, the Nobility, Gentlemen, Clergy, Royal Boroughs, brother Masons, and, in short, every individual, in behalf of the Woolen Manufacture : In the present flourishing progressive state, in which it now stands, it would be the height of phrenzy to suffer it to languish, or be snatched away from us on any conditions. Let me then, for your country's sake, your own, your families', your friends, and for the sake of the industrious

trious poor, intreat one and all of you, to join heart and hand to support and carry it on, in its full extent. Let us, for once, see our country freed from those men called English Riders, who cram your country full of unprofitable commodities, sweep off your specie, and then ex-
 crate you and your country into the bargain: Let us have no more keepers of Scots Linen Halls to be venders and encouragers of English Woolen goods; a public affront to common sense, and treating the convention of Royal Boroughs with the utmost contumely: Let all the public spirit we are master of be directed to the Woolen Manufacture and the Fisheries: Let us, I say, from the shoes on our feet to the hats on our heads, be clothed in the manufactures of our own country. Then may we bid defiance to poverty, look down on our enemies with contempt, chastise their insolence, and rise superiour to all those calamities we have long suffered, through our own inactivity and tardy supineness.

C H A P. IV.

S E C T. I.

Of Porter, and other Malt Liquors.

WANT of money is almost an universal complaint in this country; neither will it appear the least surprising, when we consider how very fond we are of sending it abroad, for such commodities as we could either want or manufacture at home.

I presume I was not far wrong in my calculation, when, three years ago, I estimated the money remitted annually to England for the two articles only of Broad Cloth and Porter, at the enormous sum of two hundred thousand pounds sterling. Concerning the former, I have already said as much as may be necessary; and the latter is reserved for a subject of discussion in the present chapter.

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To affirm that the Porter-brewers in this country have arrived at the same degree of perfection in their profession as those in London, would be offering an insult to the taste of the public; nor, indeed, can it be thought at all practicable, so long as we continue to encourage the London, and cramp the genius and patriotic undertakings of enterprising Scotsmen.

We all know, that before this liquor be in a proper state for drinking, it should be kept a considerable time both in the cask and bottle. It is therefore necessary to brew large quantities at a time, and to have a considerable stock, at least a twelve-month's supply, on hand, before it be broached for sale. But, can it be expected, while we are so partially attached in favour of London Porter, that our brewers will risk their whole capital upon articles, the sale of which depends so much on the caprice of the public, as to render it a losing trade?

Several brewers, however, in this town and neighbourhood have, of late, done much business in this way; and though, perhaps, they have not brought Porter to the same perfection as the genuine London, owing, I presume, to the cause above assigned; yet I will be bold enough to say it is more wholesome, and less adulterated

adulterated with small beer, than most of that liquor which is sold in our taverns and public-houses for London Porter. It may not, indeed, have the exact flavour; but I cannot, notwithstanding, attribute it to the unskilfulness of our brewers, nor to any deficiency of materials necessary for its manufacture.

I know it has been advanced, though the assertion cannot be supported by reason, that Porter cannot be made without Thames water. Mr Combrune, who wrote a very sensible Essay on Brewing, (and, indeed, every man of sense with whom I have conversed on the subject), most justly ridicules this vulgar prejudice. Besides, will any cockney take upon him to say, that all London Porter is brewed with Thames water?—Surely, no; when it is evident, that for one butt made from this, ten are made from that of the New River, the principal quality of which is, that it is very *soft*. Now it is well known, there is not *softer* or better water in all Britain than that with which this neighbourhood and city are supplied.

To maintain, then, that the people in this country cannot brew Porter equal to any made in London, either for want of skill, or the necessary materials of barley, water, hops, &c.

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is an insult offered to their understandings, and propagated only by London brewers, and a few of their adherents, to stop the rising progress of that which they find is beginning materially to affect their interest. Innumerable instances, of a similar nature, might be adduced in proof; but the few following shall suffice.——

It is not many years since the Soapery and Glass-Houses were first established at Leith; each of which undertakings had equal difficulties and prepossessions to surmount, before they were brought into any degree of repute; but, by perseverance and application, the proprietors overcame them all, and do now present the public with as good soft soap, and glass bottles, &c. as any manufactured in Great Britain. The prejudice formed against our soft soap was, a few years ago, much greater than that now against Scots Porter; inasmuch that the manufacturers were obliged, for several years, to put it, in the most private manner, on board of ships coming from London, bound to Borrowstounness, at which place it was sold as London soap, and met with a ready sale. Sometimes, immediately after shipping it on board a Boness vessel in Leith roads, large quantities of it were landed again at the key, and disposed of to the grocers in Leith and Edinburgh, as soap manufactured

factured at London. As I dealt, at that time, very extensively with many of the grocers, on occasional interviews on business, I have been often addressed by them in the following manner: "Mr Loch, you may continue your soapery or not, as you please; but, take my word for it, you will never be able to make soap like this at Leith." The very identical soap, however, which they had been extolling, instead of being English soap, was really manufactured at the soapery in Leith, (in which I had a considerable share), and had not been out of the Company's warehouse above twelve hours.

The current of prejudice against Scots soap was so strong and violent, that I was obliged to exert every lawful art and device to stem its progress; otherwise the undertaking must have fallen to the ground, to the great loss of the proprietors, who had by this time sunk large sums of money, to establish this valuable manufacture, which promised much benefit to the country, as well as to themselves. For this purpose, I often purchased many hundred firkins on my own private account and risk, when the stock of the Company on hand was very large, and likely to be affected by the great sums of money necessarily advanced to pay the excise, and shipped it for Newcastle, where it fetched
a good

a good price. My factor, who always found a ready market for it, was often told by the purchasers, that it was better than any London soap they had ever seen.—Sometimes a part of this very soap shipped for Newcastle, was returned to the port of Leith, and vended there, and at Edinburgh, for English manufacture. At last, when its reputation was established under a foreign name, the author of these sheets called a meeting of the merchants, Mr William Mein, Mr George Rigg, and sundry others, who dealt in that article, disclosed the facts above mentioned, produced the accompts of sales of the said soap at Newcastle, to the amount of many thousand pounds sterling; and entirely convinced them that the soap they had purchased at Leith for a number of years for London soap, was really manufactured at home. In this manner their misplaced prejudice was removed; they became converts to their own and their country's interest; and, from that period, we may date the æra of the existence of the Leith Company's Soapery.

The public, ever since, finding it in all respects equal to that made in England, continue to encourage it in preference to that of our neighbours, to the great emolument of the country. Whether there be any truth in the
report

report of this deception having been practised with regard to Scots Porter, that is, of its being shipped at Leith, and afterwards brought back hither and sold for *London*, I shall not take upon me to say ; but my readers may depend on the veracity of the above relation concerning the soap.

The money sent out of this country to London for Porter amounts to such a capital sum, that unless one were able to bring unquestionable proof, it would scarcely be credited. For many years past, the quantity brought annually into Leith, and the other parts of the Frith of Forth, exceeds thirty thousand pounds sterling ; and it may reasonably be supposed that Dundee, Montrose, Aberdeen, Inverness, and the other parts of Scotland, would consume twenty thousand pounds worth more—A pretty round sum, truly, to be paying for an article we can so well do without, or which we can manufacture ourselves. I should be glad to know how it fared with our forefathers who never tasted a drop of Porter ? Good strong ale and two-penny pleased them ; and, at their meetings, they were as merry, and chearful over it, as their descendants are now over a bottle of London Porter.—It is, besides, a very expensive drink ; and people in low circumstances do themselves much hurt by indulging

dulging to excess this piece of luxury, which is arrived to a pitch till lately unknown in this country. We have numberless clubs in this city, calculated for no other purpose than that of guzzling down so many bottles of London Porter as amount to the quota they are resolved to spend; while, perhaps, their wives and children at home are in want of many things absolutely necessary for their maintenance and support.

I am far from meaning that friendly, social meetings of companions should be abolished or given up. After the toils of the day, a little indulgence of that kind is very pardonable: but I wish my countrymen would study their own interest, as well as that of the place of their nativity, even in their convivial as well as serious moments, by drinking only Scots malt liquors.

I have already acknowledged that we cannot, or at least do not, for reasons before accounted for, brew Porter so well here as they do in London; but I dare venture to say, there are many persons who make such Porter as might please any English palate; and a dose of *patriotism* mixed with it will make it also agreeable to the Scots. Out of a great number of eminent Porter brewers, I shall beg leave to mention the following:—Mr George Miller, St Ann's yards;

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Mr James Hotchkiss, Grass-market; Mr Archibald Campbell, Cowgate; Messrs Gardener and Co. Goosedub; the Industrious Company, Edinburgh; and Messrs Cundell and Son, and Mr Matthew Comb, at Leith.

I have formerly hinted, that the Porter drunk in our taverns and public-houses is not genuine London Porter, but adulterated with small beer. — This fact has been declared by Londoners themselves, and others well acquainted with its true taste. In short, there is hardly a tavern or public house in Edinburgh or Leith, where London Porter, as they call it, is kept, but at least one third of the bottle is small beer, though you pay fourpence and sixpence a bottle for this precious stuff. Whether the mixture be made in London, Leith, or Edinburgh, or partly in all three, is no wise material to the drinkers: but I am certain they pay high enough to please their corrupt tastes; for what with the smallness of the bottle, and the quantity of small beer glutted down with the Porter, the guest pays no less than sevenpence for every English quart or Scots chopin. Whereas, good Scots Porter, without any adulteration, can be had at three-pence a bottle, and excellent strong ale at the same price, at any public house in the town, both which are better worth the money than the

the mixed trash drunk by hundreds of dozens in a day, in and about this metropolis. It is nothing but prejudice in some, and self-interest in others, that have brought this destructive branch of business to such an amazing height.

The aversion we have to every thing made in our own country is truly alarming. Better ale, better beer or two-penny, are not to be had in any country; and that we cannot be content with these, and such Porter as we can make among ourselves, is really unpardonable. I am afraid we deserve, in part, the epithet which Mr Glover bestowed on us some time ago, "That we had every sense but common sense;" for I do think that a Scotsman who will not wear good cloth because it is manufactured here, and refuses to drink Porter because it is brewed in or about Edinburgh, really verifies that gentleman's assertion, and proves himself inimical to the welfare of his country.

I think, however, that this folly is wearing away very fast, there not having been near so great a quantity of London Porter imported these three years as formerly; nay, I find on inquiry that it lessens every year. Indeed, if we were to reflect seriously on the consequences attending it, we should put an entire stop to it,

by an unanimous resolution to drink nothing but home-brewed malt liquors. It is only about two years ago, that about twenty public-spirited merchants and tradesmen laid out a considerable sum of money in purchasing Scots Porter from the brewers, who sell it again to the inhabitants in bottles at two shillings and threepence per dozen, ready money, the bottles to be returned. Since the above time their numbers are increased, and now there is scarcely a corner in Edinburgh or its environs, where it may not be purchased of an excellent quality, at the above price. In short, by that spirit of patriotism, which seems to influence most ranks of people, there is not at this day one tenth part so much London Porter imported at Leith as there was seven years ago.

This public spirit is not confined to Edinburgh alone; for it is well known that Scots Porter meets with a ready sale all over the country; and it is much to the interest of the landed gentlemen and farmers to encourage it, as the price of barley is moderate. It is an undoubted fact, that, a few years ago, one hundred thousand bolls of barley were annually made into malt, and brewed in London for the Scots consumpt. What an enormous quantity!—I hope this will never be the case again, and that the farmers
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and landholders, especially those in our fine barley countries, will exert their utmost efforts to promote the sale of Scots malt liquors, and put a final stop to a trade so incompatible with the interest of the country in general, and theirs in particular.

I have often heard the landed gentlemen, whose rents were mostly paid in barley, complain that the price of that grain was much too low. But how should it be otherwise, so long as those very persons who make the complaint continue to drink and give countenance to nothing but London Porter. An honest brewer buys your barley, makes it into good malt, and then brews excellent ale, porter, and small beer; and when he has expended all his money upon you, and exerted his utmost skill to please the taste of the public, you landholders and barley merchants absolutely refuse to purchase from him the malt liquors used in your families, and send your ready money to London for Porter. —A fine example indeed, to induce these and other injured and neglected members of society, to send to London for their clothes of all kinds, their household furniture, and, in short, every thing of English manufacture, which would be nothing but a just retaliation. Depend upon it, so long as you continue in this unpopular practice, the price of barley will be low, which

might be greatly advanced by adopting a different mode of conduct.

Besides, our brewers are capable of affording better drink, for the same money, than the English can possibly do; and that for two reasons: *First*, Because they pay just double the duty for their malt that we pay for ours; and, *Secondly*, Because they pay at least triple the price for their coals. These are two principal articles in the brewing business, in which we have a manifest superiority, as well as in many others that might be mentioned; but which, alone, are sufficient to convince any rational person, that we may be supplied with as good wholesome drink at home, and at a cheaper rate than any we can import from England.

I could particularize many instances to prove the truth of this assertion, from Edinburgh, Glasgow, Dundee, Leith, and other places; but I shall confine myself to one at present; and that is, Mr Hugh Bell of this city. This gentleman occupies a most extensive brewery, and, without partiality to the manufactures of my own country, I may safely aver, that no brewer in Great Britain furnishes better malt liquors of the different kinds and prices than he does. His strong beer, or ale, known by the name of *Bell's Beer*,

Beer, is famed both at home and abroad. His small beer, too, is of an excellent quality, and, if properly managed, will keep twelve months, being but little inferiour to that which is drunk here in public-houses, under the appellation of *London Porter*. Private families may be supplied with it, being good, wholesome drink, at a little more than a penny a bottle. Mr Bell has not yet attempted to brew Porter, his demands for different sorts of ale being very considerable. This gentleman is a singular proof of our being acquainted with the great mystery of brewing malt liquors; for there is not a kind of ale of the least repute in England which Mr Bell does not imitate; nay, I need not say imitate, for he excels; his ale being preferred to the famous Burton, or any other English ale, both at home and at foreign markets.

This being an undeniable fact, I should be glad to know wherein consists the inexplicable secret of brewing Porter with equal success? The inferiority of ours to English has already been accounted for; which is, the want of proper public encouragement, by which our brewers cannot brew the quantity, nor give it the proper age, the Londoners do. Give them your countenance, and I will be answerable for the event. Let the tables be turned on our neighbours;

bours; let the numerous Porter clubs in this city, whose members will not drink our Porter for no better reason than because it is *Scots*, resolve to drink none, provided it be *English*; and then you will have the pleasure of drinking as good Porter of Scots manufacture, as ever was brewed in the city of London.

These clubs are composed chiefly of merchants and mechanics. I should therefore be glad to know how they would relish it, if the noblemen and gentlemen of property were to withdraw their business from them because they were Scots merchants, Scots wrights, Scots shoemakers, &c. What just reflections would they not have, and how much would they not be offended to be told, that none of them understood their business so well as the * English? This, however,

* I have always averred, that my countrymen have genius equal, if not superiour, to any in Europe; a striking instance of which I observed some time ago at Keith-mill. The ingenious Mr Thomson, at that place, has made great improvements in most of the materials and utensils in husbandry; of whom all the necessary articles, constructed upon the simplest principles, can be got upon the most reasonable terms, and whose inventive genius entitles him to the patronage of the public.

however, is the very treatment these same persons give to the brewers, and woolen manufacturers of their own country. Let such apply this striking simile home to themselves, and they will immediately see the injustice of not giving proper countenance to their own manufactures. None need be ashamed to do so; nay I am inclined to think it is a duty incumbent on every person, however exalted may be his station in life.

In the last place, I beg leave to inform my readers, that there are several gentlemen of character employed in the distilling and compounding of Scots spirits, not inferiour to any made in England. Mr William Finlay at Croftangry, Abbey; Mr William Espie in the Lawnmarket; and Messrs Gavins at Main-point, Edinburgh, are all excellent in their professions. Now, as the people will have spiritous liquors, why not purchase them of our countrymen, rather than send your money to London, to enrich *Sawbridge*, and such *worthies*? To my certain knowledge, many thousand pounds a-year are sent to England for these commodities, which can be had at home equally as good and as wholesome. This political vice, with many others, I wish to see extirpated both root and branch, out of this impoverished kingdom, being
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very noxious to its wealth and prosperity; and, like *Aaron's serpent*, threatening to swallow up the little patriotic virtue remaining among us.

I cannot conclude this section, without mentioning, to the honour of the gentlemen, merchants, &c. of Glasgow, Dundee, and several other towns, that they give due encouragement to their own Porter, and every other article manufactured among themselves; especially the inhabitants of the town of Glasgow. It is about eighteen months since I took the liberty to address them *generally* (the members of the Cape Club there in particular) on this head; when the latter firmly resolved to promote the sale of home-brewed Porter in preference to that of London, although it might not be so good for some time. At this period, no less than thirty-five public houses in Glasgow drew nothing but London Porter; but the patriotic resolution of this worthy society influenced the whole town, and occasioned their number to diminish very fast; and I have now the heart-felt satisfaction to declare to the world, that there is not at this time a single house in Glasgow that keeps English Porter; nothing but Scots is drunk in public and private. On the third of October last, I had the pleasure of meeting a great number of respectable members of this club, when my
heart

heart was elated on hearing of the success that had attended their laudable endeavours. In short, I was more happy, and felt a greater zest in drinking a bottle of Scots Porter with these public-spirited gentlemen, than I could possibly have been to drink Champagne or Burgundy with the first nobility in the kingdom, whose opulence might have lulled patriotism asleep, and rendered them insensible of their country's welfare.

Nothing but firmness and resolution is required to put Scotland in a flourishing situation. We should one and all of us resolve to wear no clothes whatever, nor drink no malt liquor, nor compound spirits, but what are of the manufacture of Scotland; otherwise we counteract the interest of ourselves, our families, our friends, and connections, in short of that country which gave us existence. What a glorious instance we have of the public spirit of that ever memorable man, Dean Swift! That gentleman *alone*, we all know, saved his country from ruin, in the case of Wood's halfpence: For, tho' Wood obtained apparent to coin no less a sum than one hundred and eighty thousand pounds worth of them, by which he would have acquired exorbitant gain, and proportionally impoverished the nation; and, tho' he was long supported by those who prostituted
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the highest delegated authority to the vilest purposes, the Dean of St Patrick's prevailed against their combined force. In the character of a *Draper*, this gentleman wrote a series of letters to the people, urging them not to receive this copper money; the effect of which was, that Wood was at length compelled to withdraw his patent, and his money was totally suppressed.

I have mentioned this striking instance of the power which *one* man may acquire, when engaged in the cause of his country. It is also a convincing proof of the certainty of his succeeding, so long as the great spring of his actions are directed by the true principles of public spirit.

This obligation, however great, was not the only one which the kingdom of Ireland experienced from the writings of Dean Swift. That great politician and patriot considered the improvements of the manufactures of his country as the greatest blessing it could enjoy. To this object, a great part of his time, as well as his money, were appropriated; nor did he labour in vain, or lose his reward. Acclamations, and prayers for his prosperity, attended his footsteps wherever he passed: He was consulted in all points

points respecting domestic policy in general, and the trade of Ireland in particular : But he was more immediately looked upon as the legislator of the weavers, who frequently came in a body, consisting of fifty or sixty chieftains of their trade, to receive his advice, in settling the rates of their manufactures, and the wages of their journeymen. He became the idol of the people of Ireland, to a degree of devotion that, in the most superstitious country, scarcely any idol ever obtained. Nor is this to be wondered at, when it is remembered, that he gave above half his yearly income in private pensions to decayed families, and kept five hundred pounds in the constant service of the industrious poor. For this purpose he used to lend five pounds at a time, and took the payment back at one shilling a-week, which was observed to do them more service than if he had given it to them altogether, as it obliged them to work, and at the same time kept up this charitable fund for the assistance of many others.

I have been the more particular with regard to this great and truly good man, in hopes that others may be induced to imitate so worthy an example. I know well, that the clergy of this country are not in a capacity to supply the necessities of the industrious mechanics in the man-

ner that Mr Swift was. I do not think, however, it would in the smallest degree derogate from their character, were they not only to recommend industry and virtue from the pulpit, but even advise their hearers to encourage the manufactures of their own country in preference to every other. Dean Swift said, upon a particular occasion, that he never preached but twice in his life; and then they were not sermons, but pamphlets. Being asked, what the subject might be? he replied, They were against Wood's halfpence; meaning, no doubt, that he had never preached when the good effects of his sermons so evidently appeared as upon that occasion.

At the same time that Dean Swift was thus solicitous in advancing the manufactures of his country, he was equally studious in discharging the functions of his holy office with piety and devotion. I therefore flatter myself, that the clergy of this country, for whom this paragraph is principally intended, will not take it amiss that I recommend that gentleman as a pattern worthy of their imitation. Much service may be done by their means; and, I hope, the regard they have for their native country will be a sufficient inducement.

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One word to the ladies of this metropolis, with which I propose to end the present chapter. I cannot help mentioning to their honour, that many of them will admit no other Porter to their tables than that brewed in Scotland. Thus, while they study the interest of their husbands and families, they promote the welfare of their country, and set a laudable example to those whose province it is to preside at the head of a family — Their husbands can never think of usurping their natural prerogative of managing within doors, especially when it is distinguished by a proper œconomy. And if such a conduct should have the effect of divestling their husbands of that ill-placed prejudice some of them have entertained against Scots Porter, the ladies will justly be intitled to (and I hope they will all study to deserve) the merit of establishing a valuable manufacture in this country, by the most forcible and convincing arguments.

C H A P. V.

S E C T. I.

Of the Thread, Lace, and Silk Manufactures.

MANY persons might be led to imagine, from the warmth with which I have espoused the Woollen Manufacture, that I laid no stress at all on the Linen, nor even on the article of Thread: but it may be remembered, that, in the second chapter of this book, I recommended attention to a particular branch of the Linen Manufacture, which, I am persuaded, might be prosecuted with great advantage. And with regard to the manufacture of white and coloured Thread, the Silk branch at Paisley, and even the working of Lace, as they give employment to a vast number of hands, always find a ready market, and keep and bring money into the country, they are objects well worthy the attention of the public.

I should have been glad to have been able to thank the author of two or three judicious essays

says inserted in the Weekly Magazine, containing remarks on the state of the above manufactures in and near Paisley, from which I am enabled to present my readers with a flattering view of their importance to this nation; but as he thought proper to suppress his name, using only the signature of W. C. it is only under these initials that I can testify my approbation, and request him to pardon me for the liberty I have taken with his serviceable lucubrations.

The first of these essays appeared in December 1775, in which, to demonstrate of what consequence the manufactures of Thread and Lace are of to Scotland, we are told that, upon a moderate computation, five hundred machines were taken up at that time in twining Thread; —that each machine will employ, on an average, thirty-six industrious poor people, and, consequently, that eighteen thousand workmen were engaged at them, who thereby gain a comfortable subsistence for themselves and families. The value of Thread manufactured, rating each machine at three hundred and fifty pounds, amounts to one hundred and seventy-five thousand pounds annually; from which if we deduct a small sum for lint-seed and Dutch flax imported, the remainder is a clear gain to the nation,

as there is just so much less imported from other nations.

This patriotic gentleman observes, that the manufacture of Thread and Lace may be still farther augmented and improved, as there are large quantities imported hither from France and Holland, notwithstanding the high duty imposed; and that this country, in which the fabricating of Thread is daily approximating to perfection,—where provisions are cheap, and where the people are just now roused from a deep lethargy, is more proper for the Lace manufacture than England, as well on account of the above, as other superiour advantages hereafter to be particularized.

The Honourable Board of Trustees, on the application of the above-mentioned gentleman, about three years ago, granted a salary to an experienced person who was regularly bred to the Thread and Lace business at Lille, in French Flanders, for the purpose of teaching the French method of manufacturing threads; and another to his wife for instructing girls in the method of working Lace. Previous to their appointment, the following questions were put, tending to investigate with what degree of success the attempt might be attended.

Question 1.

Question 1. Is the yarn of this country of such a quality as Lisle Thread may be manufactured of it?

Answer. Scots yarn answers the purpose of making Lisle Thread every way as well as French yarn; and were the Board of Trustees to give a small premium to such as would produce the greatest quantity of yarn of their own spinning, of the best quality, and of certain specified grists, the said premiums to be distributed to ten individuals in each sheriffdom or county, where any great quantity of yarn is spun, there is a strong probability that a sufficient quantity, and of such a quality, would be produced in a few years, as would enable the manufacturers to supply the London market with Lisle Thread.

Q. 2. What is the finest number you have manufactured of Scots yarn?

A. The finest I have manufactured in this country, of Scots yarn, is No. 300.

Q. 3. Can the said Thread be manufactured upon equal or lower terms with that in French Flanders?

A. The expence of making Thread in this country, every thing considered, is almost the same as at Lisle. Here, indeed, women are for the most part employed,—there only men.

Q. 4. Will

Q. 4. Will Scots yarn answer the purpose of making Lace Thread? If not, what yarn is necessary?

A. At present the yarn spun in this country cannot in general be applied with success to this use; yet small quantities may be found of which the coarser numbers may be made; but French yarn must be used for the finer.

Q. 5. Which is the finest number manufactured under your direction since you came into this country?

A. The finest Lace-Thread manufactured by my direction is No. Y. which turns out in the ounce way to be No. 200. and in the Lisle way No. 600.

Q. 6. What proportion does the workmanship bear to Lace Thread?

A. The charge of workmanship, upon the nearest calculation, is thirty *per cent*.

Q. 7. Is there any other species of Thread manufactured in French Flanders, and what are the names by which they are commonly called?

A. There are various other kinds, such as lish Thread, embroidering ditto, forty-eight ditto, coloured ditto, stocking ditto, silk ditto, barbers

barbers ditto, three, four, and five ply ditto, for sails and nets; white and grey ditto, &c.

Q. 8. Is there any regulation as to the number of threads, or length of the skein or hank, enforced by law in France? and what are the penalties in case of frauds?

A. There was a regulation formed and enforced in the year 1733; at which time they were in danger of losing their trade by reason of frauds committed. Every manufacturer is obliged to conform himself to the standard, under a penalty of 500 livres for the first transgression, 1200 for the second, and for the third he is hindered from doing any business for a whole year, and all his subject is ordained to be confiscated at the instance of the crown.

Q. 9. What time will it take for a girl of ordinary alertness to learn the working of Lace? and at what age may she begin?

A. Four or five years are necessary for that purpose; the proper age is nine or ten.

Q. 10. What are the highest and lowest prices of Lace *per* yard, which you are able to manufacture?

A. We can manufacture Lace from fivepence to five pounds *per* yard.

Q. 11. What

Q. 11. What kinds of Lace can you manufacture?

A. French, Mechlin, Bruxelles.

Q. 12. What method, in your opinion, would be the best to introduce and establish that branch in this country?

A. The most proper would be for the Trustees for Fisheries, Manufactures, &c. to give proper encouragement to two or three mistresses, whom they shall judge duly qualified, for teaching the different kinds of Lace manufactured in France and England, and oblige them to take girls from among the poorer class, who will most likely follow that business for a subsistence; even some might be picked out of different hospitals, and the mistress to have the benefit of their work for five years. The schools should be under the direction of the Trustees.

Q. 13. What wages will a girl be able to earn when so taught to work Lace?

A. She will be able to get tenpence or a shilling *per* day.

The inferences deducible from the above premises demonstrate, that the Thread and Lace manufactures (especially the former) are of no small importance to the welfare and prosperity of

of Scotland, in which light they have been considered by the Honourable Board, who have generously granted their assistance to further their progress by well-timed premiums, and the engagement of skilful overseers; by which the great obstacles that prevented our countrymen from succeeding in them, so far as might enable us to compete with the Dutch and French, are now entirely removed, as well as the common received opinion, that we were not able to manufacture these articles on the same terms with our rivals. Nothing could be more preposterous than the latter notion, when it is considered that here we employ mostly women, there only men; and that though wages may be nearly on a par, the price of vivres are considerably in our favour.

Now, although the Honourable Board of Trustees have exerted themselves in promoting and encouraging a spirit for improvements in these and other branches, agreeable to the intention of the institution, yet there is sufficient room left here, as well as in the Woolen Manufacture, for other acts of munificence. Among the rest, small premiums, as was before hinted, ought to be given to those who spin the best yarn. It has long been a subject of complaint with the manufacturers, that but small quantities
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of good yarn are brought to market. One reason for this is, that spinners, without attending to the quality of their flax, spin it of a particular grist, not considering that unless it be of a good quality, and well drest, it will by no means answer the purpose of making fine yarn, which in this case is both brittle and uneven in the thread. Another reason is, the aukward way they take in putting the flax round the rock so as to draw the flax out, not by the end, which is the most natural and expeditious method, but in doubles. This is the principal reason that our Scots yarn is so far from being of such an even thread as that made in France : But if premiums were granted to such as, conforming to that method, should spin the greatest quantity of the best quality, the simplicity of the operation would soon make it universally prevail.

There is one practice too common among the manufacturers of Thread, which ultimately promises no advantage to them or the trade, and which practice, if allowed to continue, will prove destructive to their general interest. My friend and I are both of opinion, that it should be remedied ; and that the evil falls under the cognizance of the Honourable Board, who ought to interpose their authority. For this purpose, a memorial and petition was presented to that
respectable

respectable body in January 1771, setting forth, that many manufacturers had deviated from the former practice of making up ounce threads in hanks or skeins of one yard circumference, and forty threads in the skein; and of stitching or pound threads in hanks or skeins of one yard circumference, and twenty threads in the skein; and that great numbers made threads, and sent them to the market without stamping them with their names, and the place where made. Their words are: "That notwithstanding the obvious utility of these general rules for preventing frauds, they have been broken through by several manufacturers in Scotland, who, to humour some customers, or for *other reasons*, have reeled, and continue to reel their ounce threads, or part of them, upon a reel of but thirty-four inches in circumference; and have put but thirty threads in the skein, tho' there are some who put thirty-five, and others thirty-six. And that the same undue practice of curtailing the length and tale has been introduced in that species of thread called stitching or pound threads, which were in use to be reeled, and are yet generally reeled, by a reel of seventy-two inches in circumference, and tied up with twenty threads to the skein, but which some manufacturers in Scotland now reel by a reel of sixty-eight inches in circumference, and

tie up but seventeen or eighteen threads to the skein, &c."

The above memorial was subscribed by thirty-eight manufacturers; in consequence of which, the Board of Trustees published a regulation for ounce threads, the hank or skein to contain one yard circumference, and forty threads; stitching or pound threads, the hank or skein to contain two yards circumference, and twenty threads; Lisle threads, the hank or skein to contain twenty-six inches circumference, and twenty-four threads; and that the maker's name, and place where made, be stamped upon the cover of the parcel of thread, or upon a piece of paper properly and sufficiently affixed to it.

Upon the 23d June 1772, a representation and memorial was presented by others to the Honourable Board. The representation was subscribed by fifty persons, in which they express themselves thus: "That they readily admit that frauds should be prevented by all legal and prudent means; and this, to the conviction of every impartial considerer of the matter, will be effectually done, by obliging all manufacturers to mark upon their threads (under the penalty of being seized) their names and places

places of abode, the length of the skein, and the number of threads contained in it. 'They beg leave to assume, as an unquestionable maxim, that every manufacturer may warrantably make up his threads of such length, and with such number of threads in a skein as his employer shall order, provided only he mark his goods as above. They express their willingness, if the Trustees shall be pleased to recal their order, to acquiesce in the following regulation for one year, till it should appear how their employers would relish *any whatever, viz.* That all ounce threads be made up in twenty, thirty, or forty threads to the skein; the length to be a yard, and all to be marked as above. They contend in their memorial, that retailers cannot afford to give one skein for a halfpenny; and that if they be not supplied with Scots Thread of twenty or thirty threads in the skein, they will purchase Dutch or French Threads; and that this restriction in Scotland, and not in England, will remove the Thread manufacture to that part of the Island.'

After this representation and memorial was laid before the Trustees, every manufacturer considered the regulation published as departed from, because no means were fallen upon to enforce it; therefore, every manufacturer now

thinks himself at liberty to reel his thread at what length, and to put what number of threads in the skein, he finds most for his interest.

The general demand for ounce threads is for skeins a yard long, with thirty or forty threads; but designing men think it their interest to make up part, or the whole of their threads deficient both in length and tale; by which means the user is imposed upon, the prices reduced to the manufacturer, and the stocks of fraudulent dealers increased, at the expence of the honest and conscientious. The consequence of all this must be, that the users, finding themselves imposed on in threads of Scots manufacture, will call for threads of a foreign fabric, upon which they can depend for uniformity both as to length and tale, in every different species. There is the utmost necessity for a regulation to be enforced, otherwise the certain ruin of this valuable branch will ensue. The Trustees have received every information necessary as to what that regulation ought to be, and we look up to them in earnest expectation of their interposition. If a British act be necessary, are not they the most proper persons for originating and carrying it through?

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The two kinds of threads particularly mentioned in the queries, namely, Lisle and Lace threads, are capital branches, neither of which have been carried on to any great extent in Britain. However, it is generally believed, that more of these kinds is imported than the amount of all the Threads manufactured in Scotland. That the first of these can be manufactured of Scots yarn is shewn from experience; for it is an undoubted fact, that a considerable quantity has been made in the town of Paisley, equal, if not superiour to French Thread, both as to quality and fineness. With regard to Lace thread, before Scots yarn will answer for it, improvements must be made in the raising, watering, dressing and spinning of the flax.—As there is a large manufacture of Lace in England, and some small beginnings now in Scotland, it would be greatly to the interest of the country to make it of French yarn; and even in this way, there is 30 *per cent.* on the workmanship, besides the profit. This branch, if once properly established in this country, would be a valuable acquisition to those we have already embarked in it, and give bread to thousands of industrious people.

The gentleman before alluded to has been at incredible pains more than once to ascertain

a state of the Linen, Thread, and Silk trades carried on in the town of Paisley, and that with a degree of exactness that does honour to his researches. It must be very flattering to every well-wisher to his country, to have set before him the amazing progress made in the above branches in a few years, from which we may truly say, that Paisley can no longer be looked upon as an inconsiderable, unimportant place, but as a large, flourishing, manufacturing town.

At what time the Linen branch was first established at Paisley is difficult to determine; one thing is certain, that, previous to the union of the two kingdoms, it was only a mean and obscure village, famous only for its abbey, prior to the reformation a seat of learning. At the union a small manufacture was carried on; but the looms (which were chiefly employed in weaving Bengals, in imitation of striped muslins,) did not exceed a hundred. A free trade to England and the foreign settlements being opened, the inhabitants enlarged their views, and extended their business. Check handkerchiefs were introduced, in which, for many years, they succeeded very well; these gave way to *light goods* of all kinds, such as plain, striped, spotted, and figured clear lawns, bordered and spotted napkins, thread, gauze, &c.

&c. When they had arrived at this pitch in manufacturing, the mode of which changed with the fashion of the day, their invention had full scope in finding out new patterns, and new modes of working; nay, even fabrics entirely new became a study, in which he who succeeded best had the quickest sales and the largest profits. Hence arose a keen emulation, and the success was in proportion. Trade now made a rapid progress, until it arrived at its present perfection. As the same cause still operates, it will produce the same effects; and farther improvements may be made yearly. In the branches specified, the Paisley manufacturers excel all others in this country in every thing that depends upon fancy.

In the year 1759, a manufacturer made trial of silk gauze, in imitation of the Spitalfields manufacture. Some time after, others having made the like trial, the appearance of the goods in the London market induced a copartnership in that city to establish this branch in Paisley. Never could there have been a more seasonable time for their purpose. A circumstance happened which made the attempt succeed, crowning their most sanguine expectations with the wished-for success; which was, the death of the late king. Before this the thread gauze had been in vogue; but a general mourning ensuing, and Indian
 mullins

muslins being used for that purpose, this in a great measure put a stop to the Paisley trade. On account of the stagnation in this branch, a number of workmen were thrown out of employment, which circumstance, however, was of advantage to the London company, as they found hands ready, and instantly engaged them. The place was well suited to a branch in which so much invention was necessary, and accordingly it was introduced upon a larger scale than it ever had been before. It soon gained a preference to Spitalfields, as living was much cheaper, and wages considerably lower.

In the year 1766, October 30th, when an application was made to Parliament for an additional duty upon French cambricks and lawns, which was accordingly obtained, an exact list of the number of looms employed in Paisley was taken: The report stands thus; linen looms 855; filk ditto 702; thick work ditto 45; empty ditto 165.—Again, in the year 1773, December 20th, another exact list was taken. At this time there was a general stagnation in the Linen branch throughout Britain and Ireland. Some relief was petitioned for from Parliament; but the bill miscarried in a committee of the House appointed to examine the state of the Linen manufactures in Britain and Ireland, where it was rejected by
a small

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a small majority. The report taken at that time as to Paisley stands thus : Linen looms 557; silk ditto 876; ribband ditto 155; thick work ditto 66; empty ditto 579.

In the above calculations it should be observed, that those who were appointed to make out the above lists confined themselves wholly to the town and suburbs; whereas the state taken in April 1776, by the fore-mentioned ingenious gentleman, with which you are now about to be presented, includes those which are employed by the manufacturers of Paisley, both in town and the country adjacent; and the calculation of these branches is rather a diminution than an exaggeration of their real number.

State of the Linen Branch in 1776.

The number of weavers employed in working Linen amounted to	1500
Each man, upon a moderate calculation, will use 200 spindles of yarn; so that 1500 weavers will work up	300,000
One fourth of which is supposed to be imported, or foreign yarn; therefore deduct	75,000
The remainder is (spindles)	225,000
	Now,

Now, 225,000 spindles of yarn, allowing to each spinner 1 spindle <i>per</i> week, will afford work to (men)	4327
The number of winders, clippers, and draw-boys, are supposed to be	700
To each 20 men an overseer,	75
Bleachers, and dressers employed in whitening,	300
For making spinning wheels, weaving looms, reeds, twine for heddles, and other implements for spinning, manufacturing and bleaching,	273
The number of men employed in the whole is	7175

Besides the above number, this manufacture employs several hands in raising and preparing the flax, yarn-gatherers, carters, &c. of which a just idea cannot be formed. Now, rating the produce of 1500 weavers at 90,000 pieces, reckoning 10 yards in the piece at one shilling and sixpence per yard, the average amount is 67,500*l*.

State

State of the Silk Branch in 1776.

The number of weavers employed in working Silk was not less than	2500
Winders, warpers, clippers and draw-boys, and others necessary in the various parts of the Silk manufacture,	2500
The whole number of hands employed	<u>5000</u>

These 5000 workmen, supposed at an average to earn 5 s. *per* week, the sum paid for wages will be £. 65,000
 Each silk loom will produce in value yearly 70 l. the whole then will be £. 175,000

From the above state, it appears that the Linen and Silk Manufactures in the town and neighbourhood of Paisley, employ at least 12175 industrious poor, besides such of their families as are unable to work, and that in value they amount to £. 242,500; to which if we add the Thread branch likewise, in which there are 100 machines occupied, rating the amount of each machine at £. 350, and consequently the whole at £. 35,000, the intire value of the manufactures

tures produced in one year is £. 277,500, and the number of persons employed 15,775.

In December 1777, this gentleman presented the public with another essay, containing a fresh estimate of the manufactures carried on in and near Paisley; in which essay he expatiates on the close connection subsisting between the landed and trading interests, occasioned by the late *Corn Bill*, and also points out how alarming the idea of its passing was to trading people in general, the issue of which would have produced a fast declension of those very manufactures which are the vitals and support of this country.

The Linen trade, says he, claims some attention, as it may be considered next to the staple manufacture of Scotland, and had some existence in this place before the union. The whole produce of this branch, if we deduct from the quantity of yarn used one fourth, and the price of lint seed imported, is the equivalent for labour and profits. That we may trace the gradual progress of this trade since the 1st Nov. 1743, with some precision, I shall present you with an abstract account from the stamp masters' books, who make their report upon oath every year to the Honourable Board of Trustees.

1st Nov.

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1st Nov.	1st Nov.	Yards		L.	S.	D.
1743 to 1744	353,407	value	15,886	15	10	
1747 — 1748	413,660	—	23,671	19	7	
1757 — 1758	649,998	—	43,665	8	11	
1767 — 1768	529,022	—	54,664	12	11½	
1776 — 1777	1,194,639½	—	82,555	4	0¼	

The weavers employed in the Linen are
not under - - - 1600

Each man, upon a moderate calculation,
will use 200 spindles of yarn.

So that 1600 workmen will consume 320,000

One fourth of which is supposed
to be foreign; therefore deduct 80,000

The remainder is (spindles) 240,000

240,000 spindles of yarn, allowing to
each spinner one spindle *per* week,
will give work to (women) 4615

The number of winders, clippers, and
draw-boys, is supposed to be 800

To each 20 weavers an overseer 80

Bleachers, and dressers employed in whitening 320

In making spinning-wheels, weaving
looms, reeds, twine for heddles, and
other implements for spinning, manu-
facturing, and bleaching, 280

The whole number employed is 7695

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State

State of the Silk Branch in November 1777.

The number of weavers employed in working Silk, from 1st Nov. 1776, to 1st Nov. 1777, upon an average, was not under - - 3600

Winders, warpers, clippers, draw-boys, and others necessary in carrying on the Silk manufacture; add 3400

The whole number employed is 7000

These 7000 will earn, upon an average, 5s. per week; the sum is £.93,600

Each loom will produce in value yearly 70l. which amounts to 252,000

State of the Thread Branch in November 1777.

The number of machines for twining amount to 100.

Each machine, upon an average, will use 1600 spindles of yarn, so that 100 will consume 160,000 spindles.

160,000 spindles of yarn, allowing to each spinner 1 spindle per week, will afford work to (women) - 3076

Each machine gives employment to 6 in twining, twisting, bleaching, making up, &c. - 600

Rating

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Rating each spindle at 4s. 9d. value, in manufactured Thread, the amount is, - £. 38,000
 The whole amount of Linen, Silk, Thread, of finished goods, from 1st Nov. 1776, to 1st Nov. 1777, is not under - £. 372,555 4 0½

The number of labouring poor employed by means of the manufactures established in Paisley, is 18,371; besides their children and servants supported by them.

The Silk gauze was not so much as attempted before 1759; but the price of vivres, and, consequently, of labour, being considerably lower in this neighbourhood than at London, where it was first established, and the mode of working bearing so near an affinity to the Lawn branch, induced some manufacturers from London, and others who resided here, not only to share but to command the trade, notwithstanding every exertion the Spitalfield manufacturers could make; but then, whenever the price of labour shall become equal in this place to that in Spitalfields, and meal, the chief support of the poor, be considerably increased in value, we must necessarily expect to lose this valuable branch: In short, nothing can prevent its being carried

on wholly in that place, but that the goods are fabricated cheaper here than there.

With regard to the Lace manufacture, Paisley and that part of the country seems most likely for this branch to succeed, as it ought to go hand in hand with the Thread. This business, it is well known, gives bread to thousands in the county of Buckingham, &c. in South Britain. The industrious poor in Scotland undoubtedly live at less expence, and, in general, work for less wages. It will not now be said that they are not as ingenious as their neighbours; the contrary is abundantly manifest. There is no country that exceeds us in variety of patterns and neatness of figures, in those branches already established. The great demands for fancy goods from Scotland, is pretty sure evidence that this is the case. Is there not, then, a great probability that the Lace branch will flourish in such a soil if prosecuted with spirit? The advantages which will result from this manufacture are obvious: it will give encouragement to the manufacturing of fine Thread; it will employ a vast number of poor girls, who may begin at eight years of age, at which time of life they are commonly strolling about until the age of twelve or fourteen, a burden to their parents, and numbers maintained by the public; in short, it will
save

save a considerable sum sent annually to England and France, and may, in time, be an additional article to our exports.

It must be acknowledged, that many difficulties are to be surmounted by those who introduce a new branch. The prejudices of mankind in favour of their own plans of procedure, are hard to be overcome; but at this period of improvements in agriculture, manufactures, and commerce, these prejudices are greatly removed, at least among those who are conversant in business. It must give pleasure to many of my readers to hear, that the directors of the Hospital at Glasgow, sent, about two years ago, twenty-three of their poor girls to be taught the working of Lace by Mrs Puteau, a native of Lisle, now residing at Renfrew, who is found to be well qualified for that purpose. The consequences of this salutary measure, I hope, will soon be felt in that place where the work is carrying on, and will be an honour to those gentlemen who have set an example so worthy of imitation.

In the name of my worthy friend, let me once more address the ladies of Scotland, most, if not all of whom, it is presumed, are friends

to their country. It is not meant to persuade you to lay aside those ornaments which set you off to the best advantage,—which become your station, and distinguish you from the vulgar : No : But if such articles as you chuse to adorn your persons with be manufactured in that country which affords you the means of holding such rank in life, surely little will be necessary to be said, to persuade you to prefer those to articles of the same kind imported from rival nations. Remember, by this means, you are supporting orphans and industrious poor in your own country, saving money to the nation, and setting examples to others to use our own manufactures. But this is not all ; you will find, upon trial, the Lace made at Renfrew cheaper, and as good and as neat as any that is imported from Brussels, Lisle, or Antwerp.

Nothing now remains but to recommend this infantile, but important branch to the particular notice of the Honourable Board of Trustees. You have already granted it your aid, and, it is presumed, any farther encouragement that might be necessary to establish it effectually, that may be either pointed out, or which may be suggested of yourselves, would meet with a hearty and general concurrence.

From

From the foregoing states it appears, that the trade carried on by the manufacturers in Paisley is considerable and important, and that the only reasons for its happy increase are, the cheapness of provisions, and the low price of labour, in conjunction with the industry and ingenuity of the people. Every device, therefore, to raise the price of provisions, so fatal to the landed and trading interests, should be opposed with vigour and indignation; otherwise, the consequences would be, a decline of business in general, an increase of poor's rates, burdening the rich, while poverty and despondency would be the lot of the poor.

I cannot close this Chapter without taking particular notice of the article of coloured Threads, in the manufacturing of which the inhabitants of the town of Dundee excel all others, as well in the quality as in the quantity manufactured. The accomplishment of this has cost them much labour, expence, and industry, assisted by an uncommon exertion of ingenuity; but the event has been, that the English (who formerly monopolized this branch) are outdone and supplanted in the trade, as well as our rival competitors the French and Dutch. At one manufactory in the town of Dundee, no less than
twenty-

twenty-four throw or twist mills are employed ; in another, sixteen ; in a third, eight ; and in a fourth, seven, and so on : In short, many thousand people gain their bread by working at the different branches of the Thread business alone.—To give you an idea of its importance in this respect, I need only inform you, that, at one manufactory, 132 men, women, and boys are employed within doors, and 1400 spinners without ; and yet the proprietors can, with difficulty, execute the ordinary commissions from England, with that dispatch which is required. The town of Aberdeen, in which there are two considerable manufactories for coloured Threads, seems to be in a state of emulation with that of Dundee. Indeed, the extensive business done in this article is a strong proof of the perfection to which the conductors of them have brought their goods ; and the yearly increase of their trade shews, that it is beneficial to the proprietors, serviceable to the country, and bids fair to add to the riches and importance of the town of Aberdeen.

As the prosperity of this valuable branch is of great consequence to the country, it is not doubted but the public will pay due attention to it, and give every necessary encouragement

to

to insure its future success. I shall, therefore, beg leave to mention one disadvantage it labours under at present, which might easily be removed. At the time when the law was passed, allowing the excise on soap made use of by the whiteners or bleachers of linens to be drawn back, the Thread-makers were not comprehended in that bill. Whether this omission was owing to the manufacture being then in its infancy, or to whatever other cause, I will not pretend to say. But as the Thread-makers use the very same materials as the bleachers of linen, and the apparatus and labour for cleaning or clearing the Thread are also the same, they are undoubtedly intitled to a similar exemption. This, I am persuaded, would require no great effort to obtain. If application were once made to Parliament for that purpose, it would be sure to meet with the hearty support of all the Scots members, as well as many of the English, the request being, in every respect, most just and reasonable; and the expence attending it would be but trifling. Nothing is more common than to make a matter of public utility a part of the law of this country, by tacking it to a money bill, by way of *rider*. This would save the expence of an act of Parliament, answer every purpose that could
be

be obtained from one, and would not be refused by our present Ministry, who are fond of giving every encouragement to the manufactures and improvements of their country.

END OF THE FIRST VOLUME.



ADVERTISEMENT.

THE Author presents most respectful Compliments to the Nobility, Gentry, Merchants, Tradesmen, and others, who have honoured him with their Names as Subscribers for this Work, and begs leave to inform them, That as he is still receiving Subscriptions from every part of the three Kingdoms, he is obliged to defer publishing a list of the Subscribers' Names to the latter end of the last Volume. He also begs leave to assure them, that the remainder of this Publication is in hand, and will be finished with all possible Accuracy and Dispatch.

*St Ann's Yards,
Edinburgh, 1st Nov. 1778.*

